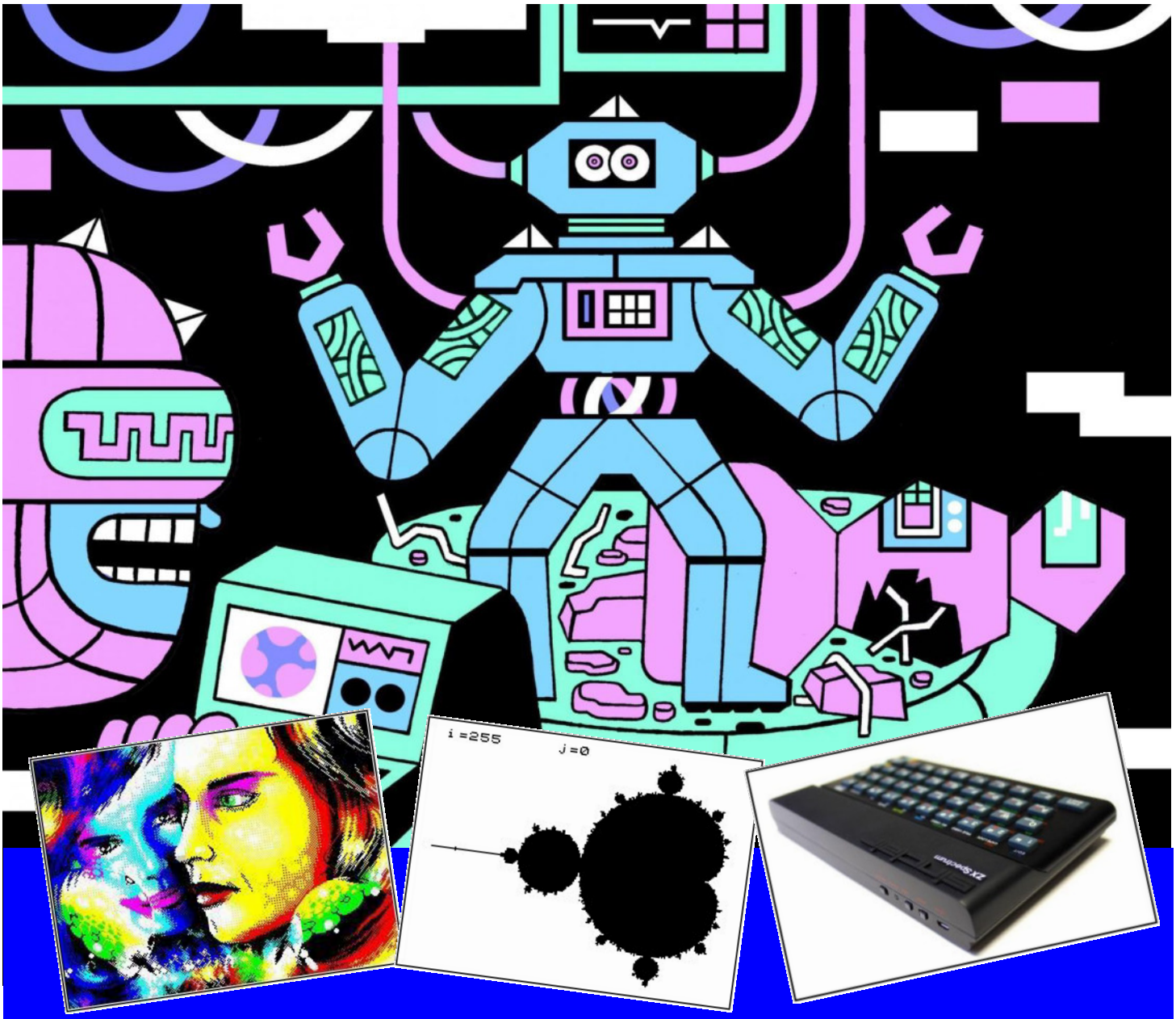
SUC-SESSION

YOUR MAGAZINE FOR THE SINCLAIR SPECTRUM



The ZX Spectrum Recreated
Spectrum+3 and DivIDE
About »Freaks« and other topics
News
Adventure Solution »Excalibur
»Cyrus IS Chess«
The first Spectrum Meeting in Sonnenbühl
And much more ...

ISSUE
222/75
OF YOUR
MAGAZINS

FOR SUBSCRIBERS WITH SCENE+ DISK AND TAP
THE NEWEST AND BEST PROGRAMS
DIRECTLY DELIVERED TO YOU

EDITORIAL

Dear SUCsession readers,

Here's the second instalment of the SUCSession that came from my computer. Unfortunately, this issue, at least from my point of view has been delayed by a few months due to health problems. Two weeks in hospital, surgery and subsequent convalescence, it was very exhausting and extremely painful. That is now, fortunately, almost over. Life goes on and I am back to work on the SUCsession. A lot has happened in the Spectrum scene. My personal highlight was the meeting on the 21st of April this year, which I organized with the active support of Thomas. The contribution to the meeting can be found in the magazine. The "Spectrum Next" seems to be on the home stretch, it's exciting what awaits us with the new, once again redesigned device in a standalone housing. Don Dindang has further developed the "Harlequin." It is now called "ZX Spectrum Nuvo" and has an SD card slot on the board. I bought a circuit board and I will populate it and put it into operation when the cold season starts.

I would like to thank the people who worked on this issue. It has more pages than SUC 74 and has a new numbering. Thomas explains why - you can certainly discuss it well. The numbering is now based on the loose-leaf collection of the »User Club Wuppertal«. In the imprint the old numbering is carried along for a while, for orientation.

At this point again the call and the request for contributions. We could use articles and syntax descriptions of the new Spectrum Next commands.

Anyway, we, the staff of this issue, hope you enjoy reading. We have, as always, put in a lot of effort.

Best regards,

Joachim Geupel

CONTENT

Editorial	2
Imprint	2
Readers Letter	3
News in short	5
The search for the perfect numbering	6
Spectrum+3 Floppy And DIVIDE Interface	7
The ZX Spectrum Recreated	8
»Cyrus IS CHESS« 1983 Intelligent Software	10
The first Spectrum Meeting in Sonnenbühl	17
Newspaper Article: Reutlinger GEA 19. April 2018	20
About »Freaks« and other topics	21
MultiPaint & PixelPolizei	25
Adventure Solution »Excalibur – Sword of Kings«	26
Software 2016	28
Advertising in the year 2018	34
Basic-Gimmicks	34

IMPRINT

The SUC-Session magazine appears in German and English and can be subscribed together with the disk-magazine SCENE+ at the *»Spectrum-User-Club«.*

Editor **SUC-Session 255/75**:
Joachim Geupel & Thomas Eberle
Editor **SCENE+**: Mirko Seidel

Club manager:
Mirko Seidel, Address: Birkenweg 8
89197 Weidenstetten, Gemany
email: mirko.seidel1@gmail.com

This issue has been supported by:
Thomas Eberle
Joachim Geupel
Mirko Seidel
Harald Lack
Dieter Hucke
Christoph Odenthal
Tobias Fröschle
Gareth Perch

Thanks to all contributors.

READERS LETTERS

Dear friends of the ZX Spectrum. For the last issue we received a lot of feedback, a lot of praise, but few questions. If you have questions about an article, if you lack a computer or wanted to add one, do not hesitate to write us an e-mail. We are happy to receive all feedback.
Here are a few comments we received:

Hello all together,
the PDF has arrived and become really good! I am very grateful that you have exposed the Vega + story, I had completely lost track of the many emotional representations!
Dieter Hucke

Hello Dieter,
of course we are not a professional editor and also not free from emotions. Nevertheless, we did a lot of research to discover a veritable criminal case here. In addition, the other magazines deliberately wanted to report anything about it, partly not to upset a large advertising customers (Koch Media sells the C-64 Mini). That´s our "free" press world. Despite all this, the VEGA + is being shipped and the police investigation is continuing, but in the end everything will come to the light.

Hello Thomas!
Thank you! The new edition has become great. It's great fun to read the magazine. All participants, and especially Joachim, a big thank you!

In the future I can translate one or another article from German to English. But please care for no big time pressure (a few days) or technical claim (I have no technical / little plan of programming and further electronic things like circuits, etc.).
Best regards, Stefan Schomburg

Thank you for the offer Stefan.
In fact, we also got the English edition relatively fast thanks to the support of some readers. But I can´t believe that especially you do not want to have any idea of electronics. I write myself about all topics and have probably the least knowledge of all that is profound. But I can write, I think at least.

Hello Thomas,
it's a great edition again and I'm looking forward to many more, it's nice that it should appear more often now.
Best regards, Rainer Kappler

Hello Rainer and thank you for the praise. As a new reader, you do not know the past, but in fact the SUC session has only appeared 1-2x in the last few years and it will definitely be 3x (as planned) this year so the promise to appear more often redeemed in any case. But while browsing though the old magazines I also admit that it is an absolute mystery to me how I once did this magazine monthly. Especially at the beginning even on the Spectrum DTP (storage space for a maximum of 1 page) ... incredible and impossible for me today.

Hello Thomas,
Thank you for the magazine. Everything arrived well. Again very interesting.
It would be even better if in the future also Betadisk format would be supported. Otherwise everything was great.
Best regards, Klaus-Peter Casper

Hello Klaus-Peter,
thanks for the suggestion. By no means do we ignore Betadisk. But we simply do not get any contributions to it and even in our own search for new products we stumble on nothing in this area. Although TR-DOS is widely used in the former CIS countries, something really new does not arise there, on the contrary, whereas software used to appear there only on TR-DOS Disk, today we also get TAP versions. As far as the SCENE+ is concerned, it will not be produced on BETA-DISK because there is no demand for it. Unfortunately, we have no readers in Russia and even though BETA-DISK was quite common once in Germany, it is no longer the case today. Incidentally, most of our readers use OPUS, along with +D. The increase in OPUS users is a surprising phenomenon in recent years. Nevertheless, the number of subscribers who receive an emulator file, ie TAP format, is higher than the number of users of real disk systems as a whole. This is slowly calling our concept into question, which also involves converting programs to disk. It is quite possible that with the advent of Spectrum Next, the demand for software on disk systems will disappear and the download will increase or software will be sent to SD cards. We will see.

Hello Thomas,
the SUC Session 74 landed well with me. I fell right on it. Big praise to the editor - I'm looking forward to the next issue. :-))
Best regards, Harald Lack

Hello Harald, the wait is over, here is the next edition. And as always with articles from you. Thanks for that too.

Hello Thomas!
I have downloaded the SUC session 74de and successfully printed out as a brochure in A5 format in good quality. The contributions are, as always, interesting. Thanks a lot for this.
Bye, Norbert Opitz

Very nice, Norbert.
However, the booklet was originally conceived in A4, which was a desire of our readership to make the book more readable. The A5 format is certainly also readable and perhaps practical to take along, but more exhausting for the eyes. But the advantage is of course that anyone can print it as he want.

Hello Thomas,
sorry, that I will contact you late. I received the printed SUC session by post. Also the e-mail with the link to the magazine has arrived.
Thank you for your sensational work.
Best regards, Bodo Langer

Many Thanks. It is really a help and a confirmation to hear from you. Although we think that you do not subscribe to the magazine because you just wanted to get rid of money, but it is just good to hear that our magazine is also read.

Hello Thomas,
Thank you for your honest lines. I will still transfer the amount to Mirko today. I would also like to continue with package 1.
Did you ever think about sending the disks and information via Hermes? According to my wife, this is not more expensive than DHL. Last night I wrote again to DHL, and explained the facts with the diskettes. But I have not received any feedback yet.
See you soon
Greeting Lothar Ebelshäuser

Unfortunately, Lothar has problems with floppy disks that are illegible. We are of course not sure if all users try the disks and then really complain about non-function, but with us is always only one complaint and that is that of Lothar.

However, the disks are not sent with a parcel service, that would cost at least 3-4 euros and too expensive. Therefore, we ship as a letter to 0.85 euros within Germany. It even costs 3.70 euros abroad, which is more expensive than the paid subscription share. But we have only a few floppy disk subscribers abroad and from September there will be a cheaper shipping option. Your letter to DHL will not be successful, if at all you would have to contact the German Post. Such a company does not have any interest in our disks. In your case, we have already noticed that it is sufficient to protect the disks with aluminum foil. I guess something happens with the letters on the way from me to you, because only your disks seems to be damaged. Maybe other readers have had similar experiences in the past.

Hi! Got it!
Great with the translations, really cool.
Alan Petrik

Hello Factor6,
we had actually installed a test stage in the last issue, so the whole issue was still read and corrected by Gareth Perch. Not everything is now as an Englishman had done, he said the booklet has its special charm in that it is just a German magazine and has been translated. He did not want to destroy this charm, but he made some corrections so that we are very satisfied overall.

Hello Thomas,
When I got the first SCENE+ disk (Opus Discovery version, compliment for that), I found that it was configured to work as drive 1 in a DS DD 720k drive.
However, in the default discovery configuration (at least in my configuration), drive 1 is an SSD 180k (official drive from Opus Supplies Ltd.) and an additional DS DD 720k drive is configured as logical drive 2.
I've kept this to maintain compatibility with Discovery software distributed on the SS SS 180k standard disk.
Running the SCENE+ DS DD 720k hard drive resulted in errors because it searched for all files loaded from logical drive 1.

The solution came again from the Spectrum Discovery Club Newsletter PDF (page 331).

In issue 9 (October 1988, just 30 years ago) a small program by Christoph Idstein from West Germany appeared (yes, there were two "Germany" in 1988) called DRIVE CHANGE, which loads the logical drives of Spectrum and Reverse Discovery reset (1 becomes 2 and 2 becomes 1).
I start this utility before loading SCENE + DS DD 720k and everything is fine because my DS DD 720k drive behaves as logical drive 1.

Here is his short program:

```
10 DEF FN a()=CODE INKEY$#4+256*CODE
   INKEY$#4:
   OPEN #4;"CODE ":
   POINT #4;8192
20 POINT #4;FN a()+10:
   LET adr=FN a()+1:POINT #4;adr
30 LET da1=CODE INKEY$#4:
   LET da2=CODE INKEY$#4:
   RANDOMIZE CODE INKEY$#4
40 LET db1=CODE INKEY$#4:
   LET db2=CODE INKEY$#4:
   POINT #4;adr
50 PRINT #4;CHR$ db1;CHR$ db2;:
   RANDOMIZE CODE INKEY$#4:
   PRINT #4;CHR$ da1;CHR$ da2;:
   CLOSE #4:
   NEW
```

I hope that helps all Opus users with the same setup as me.
Greetings from Italy, Carlo Malantrucco

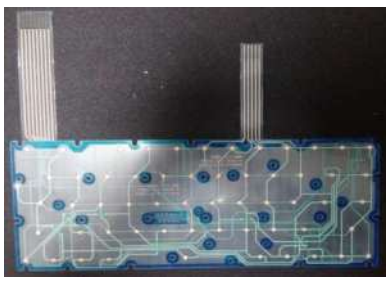
Hello Carlo,
I'm happy about your engagement. Since we are also a club for the various disc systems of the Spectrum, it is always interesting to learn about the peculiarities of the systems. In fact, the Opus was originally delivered with 180k, most users have then made a 720k extension, whether as the 1st or 2nd drive. I too was an Opus User before 1995 followed by a MB02. My Opus is still here, but with two 720k drives. Originally I had also used a disk-exchange program to swap 180k and 720k drive, but later replaced the 180k drive completely. Somehow I assumed that everyone did it that way. But you are the proof that it is not like that, so the program now helps anyone who has not yet had a disk swap program in the collection.

NEWS IN SHORT...

Vega + with a minus

The good news is that after more than two years of waiting, the first 400 backers have now received their VEGA + in the new version. Why only 400 out of 4500? Throughout the argument in the dispute with the former partners of Retro Computers Limited, it had to be made sure that for all promised 1000 programs, the permission of the software owners was really present. Actually, a company should have clear documents about this, but as these obviously have not been done properly before, they do it now. Among the backers one has asked, who has the interest to receive the VEGA + with only a few games and only those who wanted this were in the pot for the first batch. In addition, they have decided to start with a smaller production to be able to readjust if something is noticeable in the first feedback. It is not uncommon to do the same thing, rarely does a manufacturer in the first version produce the same devices to cover the whole market at once. But seeing that the backers wait now a long time, it would not have been wrong to start now with the entire delivery. The market may be much bigger and so further productions are due anyway. (Picture below the old V1, above the new V2)

The NEXT millimeters



Everything around the Spectrum NEXT is much quieter than e.g. at VEGA +. One reason, of course, is the information policy with which the backers (investors) receive constant updates. The keyboard membrane has just been produced and there are still some subtleties in the case. After a final test, there is the green light for mass production.

MB03+ Ultimate

The MB02 has been at the beginning of the 90s in Slovakia. 8BC then took over production and produced about 50 devices. After that there were replicas, most of them by our Ingo Trup-pel.
Now there are thoughts to revive the whole in the form of an update. New technology makes it possible: the MB03 + Ultimate is smaller due to FPGA and modular setup. Floppy support is also possible via module. In addition to the DMA, already built-in IDE with CF-card socket and the very good and well known operating system, probably also the sound possibilities will be expanded (Turbosound, saa1099, Soundrive / Stereo-Covox) Sounds like everything was considered, now it has to be realized.

Czech magazines

The well-known magazines "Proxima Magazin" and "ZX Magazin", which were created professionally at the time, are now available for download. The previous page has been deleted, but now there is a new one: http://www.zxm.cz/
The language is not as common as English, but the magazines are very interesting.

Master of TAP files

MB02 friends are happy, TAPMASTER got an update. This utility makes from emulator format again correct Spectrum-files, so that they can be used with BS-DOS. The new version 3.0 can convert multiple files at once, can change the location of the Spectrum files and you can always see how far the process is already advanced. Thanks to HOOD, the new version can be downloaded from his website:

https://hood.speccy.cz/dwnld/TAPmasterinf.htm

New Spectrum movie

After the first movie "Spectrum Addict", Andy Remic is now finalizing his second movie “Spectrum Addict LOAD FILM2".
I did not see the first movie, but the reviews are very good and of course it's about the Spectrum and why you have to be a fan of it, with interviews from past and present Spectrum people. If you still want to secure the film:

http://www.remicmedia.com/speccyaddict/

THE SEARCH FOR THE PERFECT NUMBERING

Hi Guys,
Today I write history, SUC history, which is to find out which issue we currently have. The reason is that the SUC session under the current editor-in-chief Joachim seems to be more frequent again, more often than the Scene+ will ever be able to do. That's why we have to change our whole concept and change the appearance of both mags together.
The Spectrum User Club was founded in 1983 in Wuppertal. The issues 1 to 117 (1993) were published by Rolf Knorre, at the end it was only a small collection of leaves, created by members and copied together by him. The numbering was no longer correct, Rolf Knorre had unconsciously twice changed the number and so he was at number 115 and I have continued from April 1994 with number 116. I soon noticed the mistake and corrected it. For issue 186, I made the same mistake and so got the issue 04/2001 also the number 186 instead of 187. The error continued. In Issue 05/2003 (197) this error was again corrected with issue 201 (so there was no issue with the imprint "200"). The numbering was continued for 10 issues until then issue 210 (which should have been 211) in August 2007 was the end with the SUC session.
The idea was that the Spectrum-Profi-Club continued its successful magazine at that time, while we can concentrate on the disk magazine. But it turned out differently. The creator of the SPECTRUM PROFI CLUB (SPC), Wolfgang Haller, suffered a stroke and at first we even helped out with a copy of the SPC club magazine. There was a gap that we wanted to fill again, even though after some time the magazine of the SPC was continued by Leszek Chmielewski as an editor (but with fewer issues and with longer and longer release intervals). As a result, there were some pure newsletters for SCENE+ until in 2010 the newsletter again became a small magazine called SUC-Session, which led after 6 issues in late 2015

to the A4 issue in its present form. We initially kept the numbering of the newsletter, which was aligned with the number of SCENE+. So we have 211 issues of the Spectrum User Club magazine and SUC session + 6 issues of the SUC session as newsletter and then 4 issues since the rebirth of the SUC session, so this issue now gets the number "222".

It's possible that other mistakes will come out of the Wuppertal time, because not even I have all issues. But according to the current state of research, this edition is a schnapps number here.

Cheers!

Thomas

SPECTRUM+3 FLOPPY AND DIVIDE INTERFACE

I often get the question if people can still use the floppy drive on a ZX Spectrum +3 in case they order a DivMMC EnJOY! interface. So let's find out.

Accessing the floppy drive on a ZX Spectrum +3

To access the floppy drive in a ZX Spectrum +3, you need the commands that are available in +3 BASIC.

When you enter 48 BASIC, these commands are unavailable, so you really need +3 BASIC.

ESXDOS and URS0 Mode

ESXDOS, the firmware for any DivMMC interface, currently only supports 48K BASIC in USR0 mode.

USR0 mode means you will have all the 128KB memory and the 3-channel sound available, but +3 BASIC is not enabled.

ZX SPECTRUM TOAST RACK, +2 and +2A

The black ZX Spectrum +2A uses the same ROMs as in the +3 so also has +3 BASIC, and the toast rack and grey +2 use 128 BASIC. All of these enhanced BASICs are disabled once booting with ESXDOS into USR0 mode from a DivMMC interface.

Will ESXDOS support 128 Basic or +3 Basic in the future?

It doesn't seem so. The focus is on new features like RTC support and Long FileName support, but since there are not many people involved, speed of development is well, let's say, not as high as many wish for.

So can the floppy drive be used with a DivMMC interface or not at all?

Yes, it is possible, but.. not easy and very limited. Currently the only way of using +3 BASIC with the DivMMC, is by using the +3e ROMs. The +3e ROM modifications introduce its own way of formatting and using the SD card.

It's far more complicated to use compared to ESXDOS, and will not support .TAP or snapshot files.

But if someone would just write some DOT-command that mimic the +3 floppy drive commands, that would be great.

A DOT-command is the flexible way of adding BASIC commands to ESXDOS, and since the floppy hardware is simply still present and available on a +3 when a DivMMC interface is connected, why not use it?

Hey, maybe if I find the time for that myself some day..

THE ZX SPECTRUM RECREATED

We do remember: the *ZX Spectrum Recreated* was a Crowdfunding project by Elite. The aim was, as with all Crowdfunding projects, to get enough money together to fund a project; in this case the *ZX Spectrum* to allow a fresh start in modern case and technic

The ZX Spectrum Recreated has been delivered. The promotional videos showed enthusiastic gamers who played video games on a Tablet PC or a Smartphone, the *ZX Spectrum Recreated* before him on the table, or on a train, hacking at the keyboard.

When you look nowadays on the internet for *ZX Spectrum Recreated* searches, you will find more of the headlines *»When Kickstarters go bad: chasing down the recreated ZX Spectrum«.*

But the *ZX Spectrum Recreated* actually has not earned this fate.

The concept is a Bluetooth keyboard in *ZX Spectrum* design. The Software is able to run on the Tablet PC, the Smartphone, a device from Apple, under Windows or Linux; OK Win 10 is special - but further down more.

The Bluetooth keyboard called *ZX Spectrum Recreated* can actually be used as such. The promotional video shows the same man who previously played on the train, sitting in front of a monitor and with more or less serious, perhaps slightly amused facial expressions, writing a text on the Recreated. Yes! That actually works! It's slightly awkward, admittedly. The keyboard of the *ZX Spectrum recreated* not really offers the comfort, which is normally provided by a common Bluetooth keyboard - but it works!

From outside, the cases of original *ZX Spectrum* and the *Recreated* are very similar. Of course, the *Recreated* has no edge connector on the rear panel. Also no EAR, MIC Jack and the 9V DC Connector. You are looking for a HF-output also in vain. But you can see three buttons, a micro-USB socket and a multicolor LED which indicates the status.

Two AA NiMH rechargeable batteries provide the power supply. Alternatively, a 5V-USB-Power supply can be connected.

Operation:

On the back, at the position taken in an original *ZX Spectrum* of the video modulator and the EAR and MIC jacks are the operating part of the *Recreated*. There you will find the status LED, the Bluetooth pairing button, the switch of layer A-B and the USB connector to the power supply, and the ON/OFF switch.

ON/OFF switch:

The »ON/OFF switch« is self explanatory. Here the *Recreated* is switched on and off. The USB socket can only be used to recharge the batteries, not for connecting to a Computer.

The status LED:

The Status LED indicates the mode of the *Recreated*. Immediately after switching on, the LED lights blue for approx five seconds then turns off. Probably, the *Recreated* is initialized in this time. Afterwards the LED is off, saving Battery Power.

When two rechargeable Batteries and the USB Power supply are connected, the batteries are being charged and the status LED will flash red. If the rechargeable batteries are charged, the LED lights up permanently red.

The button »pair«:

The button »pair« has a special importance. Since the function of the Recreated is significantly based on Bluetooth, the appropriate devices can also communicate. When the button »pair« is pressed, the *Recreated* is looking for a Bluetooth connection. On the other device, PC, Tablet, etc.,

must be searched for a Bluetooth device. This may take quite a while, especially when the supply voltage is low. It can come to strange phenomena, E.g. that, if the original Android program *»ZX Spectrum Recreated«* is running on my Tablet PC and launched the *ZX Spectrum* Emulator, the token »LOAD« will only appear after permanent repeat sometimes.

At least for my Tablet PC, I found that this occurs when the battery of the recreated and/or the battery of the Tablet PC are not fully charged. Further problems appear, when WLAN/WiFi is turned on at the Tablet PC

The Switch »Layer«:

With the selector switch »Layer« the function can be toggled between *ZX Spectrum* and Bluetooth keyboard.

A sticker is included in the box, which fits the dimensions exactly next to the Sinclair logo of the *Recreated*. On it, the keyboard shortcuts are to find if the Recreated is used as a Bluetooth keyboard.

USB socket:

At the far right, the USB port is located. Maybe it is supposed to be used for updates, but in the manual it is only mentioned as input for power supply to charge the batteries.

Here, it should be noted that the *Recreated* is designed for operation only with batteries. Two fully charged batteries have a voltage of approx. 2,5V. This is sufficient to operate the *Recreated*. If two batteries a 1,5V are inserted, the charging of course is not needed, unless one wants to leave the *Recreated* to die a short and painful death, overheating batteries.

Inside the *ZX Spectrum Recreated* there is not much to find. The Bluetooth mainboard card with the controls is only marginally wider than the place for the controls on the back. Nearby the two batteries are located. The rest of the Case is empty. Here the hobbyist can enjoy themselves, to build a few expansions or additional hardware, but right now I cannot imagine what this might be.

To work with the *ZX Spectrum Recreated*, you need a working computer that has Bluetooth as well as a corresponding program.

To test the *Recreated*, I had used my Tablet PC. After some problems with the communication between the two devices were removed, it was real fun to try several programs. Of course, the first choice was the Recreated program of »ELITE«. The following images show two games of Spectrum 48, as they are adapted by Elite. The third image shows the spectrum emulator »Spectacol«, the equivalent of »FUSE« under Android.

I preferred the *ZX Spectrum* emulator »Spectacol«. This Emulator-Program offers the possibility to connect a *ZX Spectrum* recreated in the Setup.

To be honest: The Emulator »FUSE« and »Spectacol« both have better gameplay than the ELITE Program, that comes with the *Recreated*.

While Elite offers many games for the *Recreated*, they also sell games for paid download, but those games already are available as a TAP, SNA - or Z80

file for free download. Also, it is not possible to save your own programs or to import the mentioned formats TAP, SNA or Z80 into the program of *ZX Spectrum Recreated*. If somebody has figured out how it works, please let me know!

The Keyboard:

It is always claimed that the *Recreated* offers the same keyboard feeling as with the *ZX Spectrum*. I've been using »Fuse« and wrote a couple of small programs just for fun, mostly programs with simple graphic, lines and circles. Indeed, the feel of the keyboard is similar to the keyboard from the original *ZX Spectrum*. But the *Recreated* keyboard doesn't work as well as the keyboard of a ZX *Spectrum*.

Partly, the keys are not immediately accepted or respond with some delay. Whether the reason is on the Bluetooth communication or with the keyboard itself, I don't know. The keypress itself is also slightly less well than the original. The resistance of the keys by pressing them, is only slightly stronger on the original, but this makes a difference, since the keys tend to side tilt down when pressed. The slightly higher resistance of the original ZX keyboard makes it better to use.

ZX Spectrum Recreated and Windows:

An obvious idea is to operate the *Recreated* with Windows. But unfortunately that doesn't really work. Windows 10 recognizes the *ZX Spectrum Recreated* and displays it. However, Windows 10 then asks to enter a multi-digit key on the *Recreated*. I've tried a bunch of stuff: juice in the *Recreated* into empty, yell at him, threatening with a hammer - it has brought about nothing. Windows 10 was just as stubborn. With Windows XP, however, it worked. Turn on Bluetooth, check connection at the *Recreated*, press the pair button - voila, it worked.

Although a patch is mentioned on the Internet fixing this topic, I have not found such a patch; maybe i am too stupid for this?

By the way: there is yet another difference from the original *ZX Spectrum*. You may compare the two related images. The left picture shows the original Spectrum 48, the right picture showing the Recreated. Who gets the difference out, WINS... No! We are not so far!

The Original

Recreated

Until a few months ago, Thomas Eberle, Mastermind of *»SinTech«*, still stocked *ZX Spectrum Recreated*. These are unfortunately sold out now. Apparently, the recreated proves to be an investment. If *ZX Spectrum Recreated* are available anywhere, they cost well over €100.

The emulator »Fuse«

The emulator »Fuse« for Windows and Linux (Version 152 by writing this article) is available in Version 1.5.2 on the website *»http://fuse-emulator.sorceforge.net/«*.

There are versions for all major operating systems including Amiga, Xbox, haiku, MorphOS, etc. If the emulator is not directly downloadable, direct links to the other sites are to find.

I am running my *Recreated* on my Tablet PC. The program on Android is called »Spectacol« and is based on the Linux version of fuse.

https://spectacol.soft112.com/ - this version can be loaded via the Google Play store or directly on the page. It is freeware and available in the current version 3.0.5

Joachim Geupel

»CYRUS IS CHESS« 1983

INTELLIGENT SOFTWARE

By Harald Lack

Dear Spectrum Friends,

I don't need to tell you that you can do a lot of different things with the Spectrum. You can simply play or you can do more serious things like using applications or even writing your own programs. Whatever you do with this fascinating machine, it's fun to spend time with it. Usually I'm writing about adventure solutions, but from time to time I'm doing things other than solving adventures – like gaming! And what would be more suitable than the queen of strategy or board games:

CHESS. As you may know there are a lot of chess programs for the Spectrum with different advantages and disadvantages. I just want to give some examples like Masterchess, Chess the Turk, or Chessmaster. But one of the best known chess programs for the Spectrum would surely be »Cyrus Chess« from the studio "Intelligent Software". Before we deal with the different characteristics of these programs I want to do a small excursion to the history of chess, respectively computer chess. The term "Chess" was derived from Persian "Schah = King". Because of this it is also known as "The Royal Game". It is a strategy board game and is played on the well-known chess or draughts board with the 64 white and black fields – note that the board has to be oriented in such a way that there is a black field to your bottom left corner! I assume here that you know how to place the different chess pieces. The aim of the game is to achieve a situation where the opponent's piece (called "King") is in a place where it can't escape – that's called checkmate. When reading about the history of chess you may have stumbled upon the legend of "wheat and chessboard", where a smart man called "Sissa" invented the game of chess. His emperor was so delighted about it that he granted him a wish of his own choice. Sissa demanded a chess board filled with wheat – one grain placed on the first field, two on the second, four on the third and so on (doubling the number each time). The emperor allegedly wondered himself about the modesty of this wish. Perhaps you may know how this story ended – in total the emperor would have had to deliver 18 quintillion grains of wheat. The total annual harvest since the beginning of wheat production would not be enough! This legend very clearly shows the human inability of estimating exponential growth. For all who may be interested, here a small excursion into mathematics (don't worry it won't be too demanding):

The general exponential function is called "y = ax" and is valid for all "a" greater than zero. It is defined for all "x" and only evaluates to positive values. It is monotonically increasing for all "a > 1" and monotonically decreasing for all "a < 1". For the value "a = 1" it is constant. So, enough of the strict mathematical definition. Maybe you can imagine a bit better how it works with my next remarks.

Based on the legend with the grain of wheat you could try to determine the result by adding up and writing down the number of wheat grains lying on each field for all 64 fields of the chessboard. This would look as following for the first eight fields of the board:

1 + 2 + 4 + 8 + 16 + 32 + 64 + 128 = 255

At a first glance, that does not seem to be too difficult and quite feasible. It seems that the number does not get very big either. Unfortunately, the numbers are growing rapidly and the addition will become very time-consuming and error-prone over time. If you continue to do this for a few more fields, you will soon see that you can no longer imagine the number of grains and that you aren't able to find any really existing objects which may be comparable.

But you may still want to know how many grains there will be at the end – At this point it makes sense to approach the topic in a more structured way. Since the grains doubled on each field, we speak in this context (as already mentioned) of an exponential function or equation.

Where:

- y is the number we are looking for (i.e. the amount of grains).
- a is the base, the factor of change (in this case 2, as the number is doubling each time).

- x is the power with which the number of grains change (in our case 64, which is the number of fields on the board).

The best way to do this is to first have a look at a small part of the whole problem. If we look at the first field, according to the formula above we would have to calculate:

y = 21 which results 2 (2 to the power of 1 is 2).

Now there is only 1 grain on the first field, not 2. We resolve this by subtracting 1 from the result, then we get the correct value. Let's check the whole thing for 2 fields.

$$y = 2^2 - 1 = 2*2 - 1 = 3$$

This is correct so it must be true for all 64 fields, too. Now we can generalize this function.

$$y = 2^{64} - 1 =$$

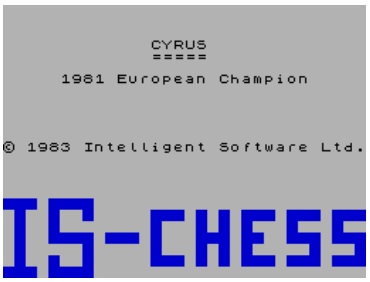
18,446,744,073,709,551,615 grains!

Show me one who can imagine this number! :-). If you have a lot of time and leisure, you can buy a regular pack of wheat, count the grains in it and then divide the above number by it to get the number of packs. Believe me, your wheat supply will be guaranteed for life!

Who wants to know more about this topic may be advised to the many videos on YouTube. But enough of the mathematical considerations :-)

Chess is one of the most complex board games (besides Go). The number of possible chess positions is estimated to be around $2.28*10^{64}$. Consider the following: After only two moves, already 72,084 different positions can be taken. If you continue it's even more! The number of possible games will be much greater: Considering the first 40 moves, the estimated amount of games are already summing up to about 10^{115} to 10^{120} different outcomes. In the geometric mean it is assumed to have about 30 possible half moves per position over the course of the game.

A little note for the tinkerers amongst you. In games theory, chess is counted to the "finite number games" with "perfect information". Theoretically, it would be possible to determine whether White or Black wins during a perfect game or whether the game ends in a draw. According to current knowledge, however, it seems impossible that this question can be clarified by a complete calculation of the search tree. Since the computing power is constantly increasing, one day it may be possible with the help of the quantum computer. Since chess is a logical and strategic game, it was of course interesting to transfer this type of game to a computer. This is why more and more chess programs were published for the different computer systems, even for the Spectrum! The playing strength of the programs grew steadily, although they always stood out because of the brutal computing power required. The programs still lack the intuitive way of playing of a good human chess player, even if ever better programs come to the market all the time. IBM has indeed created a few powerful systems that can now defeat even a chess grandmaster. Since it is easier for a computer to handle a cleaned up and simplified board as much as possible, many chess programs still tend to mercilessly take any piece that is not obviously covered, regardless of whether or not some moves later it turns out to be a bad move. "Simplification" was the goal of all old chess programs and will probably still be for some time to come.



Now back to our current program review. »Cyrus« was sold in a 16K and 48K version, but here we want to focus our considerations on the 48K version. However, many of the statements made are also valid for the 16K version.

After loading the program we can see a chess board with a blinking field representing the selection cursor. Movescan be carried out by moving the cursor to a field from which a piece shall be taken using the cursor keys and by marking it with the »ENTER« key. Then the target field is approached in the same way and the moveis carried out by pressing »ENTER« again. At the same time, the move is checked for validity. If everything is correct, the computer will do its calculations and end its turn with an audible signal when it has moved. If the player wants to play the black pieces, he has the possibility to select them after launching the program by pressing the »M« key and forcing the computer to go first. The computer then of course takes over white. It then also makes sense to use the »O« key to turn the chessboard around in order to have the usual orientation (who likes to play head-first?). I'll talk later about the different difficulty levels. As for all good chess programs, it is necessary to display the course of gameplay and other general information to the player. For Cyrus this is done in the area to

the left of the board. There the continuous notation (but only the last move) is displayed as well as the information, whose turn it currently is. For the human player a "YOUR MOVE?" is shown, for the computer a "LET ME THINK ...". At the message "HUMAN V CYRUS" or "CYRUS V HUMAN" you can see who chose which colour. The notation of the moves are done in the so-called algebraic notation, where the board is divided into the commonly known rows and columns, labelled according to the international standards. For example: If the following is displayed,

2 D2 – D4

This means: It's the second turn, White moved the D2 pawn to D4. If one character beats another during a move, it is shown as follows:

13 C3 X E5

If one piece threatens another one of the opponent in the context of a move, the following is shown:

E7 - H4 +

The plus sign signals a chess threat.

In the 48K version, there is an area below the chessboard which shows the currently allowed commands. For example, if "TAKE BACK" or "LEVEL" is displayed here, pressing the »B« key will undo the last move, of course that's only possible in computer chess - in the real world, the touch-move rule counts, i.e. if you touch a piece you have to move it! You can also change the difficulty level by using the »L« key – which would sometimes also be quite useful in a tough situation against a human opponent! If invalid moves are entered by the human player during the course of the game (nobody is perfect), the message "ILLEGAL" appears and a corresponding acoustic signal is played. If you accidentally started moving the wrong piece and notice it while you are still drawing, you can simply make an invalid move and you will get a second chance drawing the desired piece. As you can see, "Cyrus" supports you in many ways contrary to the international standards. Of course, there are a few special moves in chess, which I will briefly explain from the point of view of the program. First, there

is the simple taking of an enemy piece. Like in real chess, this is done by moving your piece onto the piece you want to take. The piece is automatically removed from the board and replaced by your piece. This also works when beating "en passant" (when passing by) with the pawn. Let's go to castling. As you may know, this is a double move because both king and rook are drawn within the same move to certain other fields, depending on whether it is a short or long castling. If one of the pieces is threatened beforehand or has already been moved, castling is not allowed. In rare cases it can happen that your pawn advances to the opponent's eighth row. According to the chess rules, the player who achieves this has the opportunity to convert his pawn into another piece of any type. That's why "Cyrus" asks in this situation "PROMOTE TO?". Normally the player will turn it into a queen - this piece has enormous abilities and is actually the most powerful piece on the board in chess. If this question is posed the player can transform the piece by simply pressing the initial letter of the new piece into which he wants to convert his pawn, »Q« for the queen, »R« for the rook, »B« for the bishop or »N« for the knight. Should the player inadvertently press a key other than the ones mentioned, that's no problem. "Cyrus" simply interprets the keypress as »Q«, so you will get a queen. So in the worst case still you get away very well. Cyrus will always turn his pawns into queens, which is due to the fact that the program usually favours strong pieces.

Also Cyrus includes appropriate routines to detect a stalemate or a checkmate and to report this in the display area (STALEMATE, CHECKMATE). Cyrus detects if both player and computer move the same piece three times to the same field and back again and in this case simply announces "DRAWN" (Remis). The same message appears when no piece was taken for over 50 moves and no pawn has been moved, which is rather rare.

Depending on the current game situation and complexity, the calculation time for a move will continue to increase. The computer announces this in the well-known message "LET ME THINK ...". If the player presses a key meanwhile, the computer stops its calculations and "Cyrus" plays the most promising move that it has calculated so far. It is questionable whether this is the best

move. Later I will introduce you to some other special features of Cyrus. However, it should be noted that these can only be used when the computer is not calculating a turn. But as I said, more on that later. Pressing the »G« key when it's the players turn or Cyrus has been interrupted as described above, a new game will be started. Cyrus then asks "NEW GAME?" and stops the game in progress. But do not worry, you can return to the previous game by answering the question with »N«. Only if you press »Y«, the chess board is rebuilt, the memory cleared and a new game is started.

Like many other chess programs, Cyrus has different skill levels. In total there are eight levels available. These differ in how much time is given to the program for its calculations. The levels are defined as follows.

Level Calculation time (in average)

1	2 seconds
2	5 seconds
3	10 seconds
4	20 seconds
5	30 seconds
6	1 minute 15 seconds
7	3 minutes
8	5 to 12 minutes

As said before, the calculation times may vary, because of course the complexity of the current state of play has a significant impact on the computing time taken by the program. The 48K version discussed here also provides an internal library with various standard openings, which gives the program, especially in the beginning, some advantages especially over less experienced players, like me, I have to admit. Therefore at the beginning the moves are often faster than expected due to the chosen level of difficulty. Furthermore, Cyrus has three more special levels of play, the so-called "problem levels". Stage "P1" tries to achieve a checkmate in one move, while levels "P2" and "P3" try to do a checkmate in two or three moves, which can often take a long time because of the increasing complexity of such situations. If the program is advised to analyse such problems, the program will continue calculating until it either finds a mate or determines that there is no solution to the problem posed. I want to mention that it often takes too long to wait for it. The preferred difficulty level of the program is 2. This is also the default level after loading the program. The reason why this level has been chosen may probably be because it has on one hand a certain basic strength and on the other hand does not annoy the (impatient) human opponent with excessive response times. The difficulty level of the game can be changed at any time, as long as it is the player's turn, i.e. after every move. This is done by simply pressing the »L« key. With each keypress, the level is increased by one and then starts over again. So you can quickly move through all levels.

Let's view a few specialities – as already announced earlier. If it is the player's turn, it may happen that he simply isn't able to find a satisfying move – that often happens to me. Even in this case Cyrus offers a solution. By pressing the »M« key, the computer takes over your colour and starts moving with your pieces – it expects that you play its pieces from now on. Since you are used to play "forward", you can simply press »O« to turn the board around so that you find your usual situation again. Sometimes it may happen that you want to do several moves for both sides to start in a certain game situation. By pressing the »E« key, the message "HUMAN v HUMAN" appears and the player can enter the desired moves for both White and Black after each other in the usual way. When you have done all the desired moves you can press »M« again and "Cyrus" will continue moving with the corresponding side. This enables us to start with openings from famous professional players and then see how the game progresses. A very special function is the demo mode started with the key »D«. The message "CYRUS v CYRUS" appears and the program plays a so-called demonstration game against itself. You can often detect interesting moves and tactical variations by watching them and possibly use them for your own game in the future. When the game is over, which happens relatively fast at low levels, "Cyrus" waits for 20 seconds before starting a new demonstration game. To exit the demo mode, just press any key between two moves of the computer. "Cyrus" interprets this as the wish of the player to take over one side from now on.

As stated above in "real" chess there is the rule touch-move. Unfortunately, we humans are often very uncertain fellows and so Cyrus offers us, contrary to international rules, the ability to undo moves - try that with a serious human chess player! After the computer has drawn, press the

»B« key and the computer will turn back. Pressing »B« again will undo the player's turn, and so on. In the 48K version we're talking about, you can also force the computer to do a different move as he just did. For that you have to press the »N« key and Cyrus then does a different move, whatever it may be. By pressing this key, Cyrus will take back the last played move and replaces it with the next best one, depending on the current situation. If you press »N« again, Cyrus will proceed to make the third best move, and theoretically you can continue this until all legal moves have been tried out in the current game situation. However, this may take a while. If this situation arises, the computer reports "NO MORE MOVES" and continues with the best move again. By repeatedly pressing the »B« key you can go back a lot of moves made by both the player and the computer. Only in the 48K version, you can undo all moves until the very beginning of the game. In the 16K version, this only works for about 80 moves altogether, which should usually be more than enough. It should also be mentioned at this point that this is even possible if one side is already in checkmate. Of course this also works in the opposite direction, i.e. by pressing the »F« key, you can re-do a previously withdrawn move.

Anyone who has intensively played chess games, or even the hobbyist can sometimes play quite an appealing game of chess which would be worth re-playing. Of course, ambitious players will do handwritten notes on a paper next to the computer, so that they later can repeat and analyse the course of game. Even here, "Cyrus" offers a simple answer. By pressing the »R« key you can enter the Replay mode. The program will display "Replaying ..." and the computer will return to the starting point of the game and then repeats all moves of both sides at intervals of about two to three seconds. Of course it is possible to stop at interesting points for a longer time - maybe you want to try out a variant of it on a different board? By pressing any key, the
Replay mode is interrupted. Cyrus then offers some options to us. With the »F« key you can move forward step-by-step, the »R« key starts the automatic replay mode again. Of course you can also continue playing at the position you have reached. It is possible to enter a move or press one of the keys »M«, »E« or »D«. I should add that if you want to watch the replay until its end, you must not enter any moves since this will delete the memory of the program. The move limit (i.e. 80) for the 16K version of course also applies in the replay mode.

From time to time the player wants to start at a certain situation in the game to analyse it and to continue playing from it. For this the program offers the possibility to place all the pieces at specific positions to create the desired situation. Often, the computer is also used to evaluate a situation created during a game, especially when you have added or taken away pieces. Analyses like that led to interesting strategies which are often used by long-time and enthusiastic chess players. Whatever the reason may have been, we start by pressing the »C« key and the message "Change Position" is displayed. As long as we are in this mode, we can do one of the following activities:

You can clear the entire board by pressing the »A« key – then it is ready to be set up again in a specific situation. Of course you can also change the pieces during gameplay and leave the rest on the board. To place pieces you have to move the cursor to the desired field and press one of the already mentioned keys »K«, »Q«, »R«, »B«, »N« or » P « for king, queen, rook, bishop, knight or pawn. If there is already another piece on the selected field, it will be irreversibly removed. To clear a field without placing a new piece, use the cursor keys to select the desired field and then press the »U« (unoccupied) key. During this process of placing or removing pieces, the attentive player will notice that White or Black is displayed, which means that every piece we place will have the corresponding colour. If you want to change the colour, you have to use the "Toggle" command by pressing the »T« key, then the colour changes. When you are finished building the desired situation, it is especially important that the computer knows whose turn it is, which is actually quite logical. As long as "White" is displayed, the computer expects the human player to move; if the computer shall move, the colour may be changed with »T« beforehand. If you are in the "Change Position" mode and want to get back to the game mode, you have to press the »E« key like Exit. The computer will then only show

"Your Move" and we can continue with the game or select another option like demo game, etc. One special note about placing the pieces. If a king or a rook is placed on the board, as just described, castling with these pieces is not allowed. To achieve this, we have to start a new game with the keys »G«, »Y« and then »C«. This leaves the king and rook at their current positions, while other pieces can be removed by pressing the »U« key. In addition, it should be noted that after setting up or changing a position, the next move can not be taking a piece "en passant" (by passing by). To force such a situation manually, you have to build up the necessary situation and then play the move that supports a "en passant". That sounds a bit complicated, but it is actually quite logical. Of course, if we have created our own situation or changed one of the game, we will only be able to withdraw moves until the start of the change, just as a replay is only possible after the point of manual intervention. Anyone who believes that he has deleted the draw buffer during the game by accidentally pressing the »C« key can be relieved. If you haven't made a move, it's simply pressing the »E« key and everything is fine. In the heat of the battle, it can sometimes happen that you make a mistake when changing or building up a certain situation, for example, if there is no king, eight pawns and two queens, a pawn on the front row, Cyrus will of course notice this and report "ILLEGAL POSITION" accordingly, as this may not have been caused by legal moves from the starting position. Cyrus will refuse to play at this point. Only by converting to a legal state, we can continue. Just a few words about the numbering. If we have changed one position, the numbering of the following moves starts at 10.

Another interesting area is that of chess problems. As mentioned before "Cyrus" offers corresponding means here, too. Newspapers and magazines like to print situations which read: "White can do a check in three turns". This means that White must find a move that results in a checkmate within three moves, regardless of how Black responds. "Cyrus" can analyse such problems for one, two, or three moves. You have to set up the initial situation as described above, then you have to select the corresponding problem level P1, P2 or P3 and instruct the computer to search via pressing the »M« key. While the computer is moving, you can of course change the difficulty level and make a move for the defending side. Afterwards, Cyrus will recalculate the situation, analyse it and make a move towards its solution.

To be mean you can undo the move from Cyrus by pressing the »B« key, make another defensive move, and then see how Cyrus reacts. This can be very interesting for the curious player because it helps recognising strategies. If the computer detects that a checkmate is not possible in one, two or three moves during its calculations, a sound will ring and the message "CHANGE POSITION" will be displayed. The 48K version also announces "NO MATE FOUND". An essential part of chess problems is that there may be only one possible solution. The 48K version of Cyrus can also determine if there are other solutions. After the computer has done a move towards its current solution, pressing the »N« key will cause the computer to make an alternative move if it finds one. Otherwise the message "NO MATE FOUND" appears again. However, Cyrus can not solve problems that require a pawn to turn into a rook, bishop or knight.

Finally, let's take a look at some of the "minor functions" Cyrus offers to the player. First of all, that would be changing the colour settings. By pressing the »A« (Alternate) key, you can enter the colour menu and the computer asks "Colour for black piece?". By pressing the appropriate button (Spectrum-specific) you can change the colour of the black pieces. After that you will be asked about your wishes regarding the colours for the white pieces. By pressing the »8« button, the colour remains unchanged. If you press the »D« (default) key after pressing the »A« key, the program returns to the initial colour scheme which was in place immediately after loading of the program. In the same way you can adjust the colours of the white and black fields to your own wishes and thus generate a very personal look of the board and the pieces. However, if you do not want to change anything, you can simply return to the game by pressing any key except »8« and »D«. "Cyrus" accompanies his activities by the output of a short sound, which can be a bit annoying in the long run. By pressing the »S« button you can switch the sound on and off. The 48K version is also capable to use the ZX Printer (or compatible

devices). After pressing the »P« key for Print and then pressing the »B« key (Board), the current situation of the board is printed out. This can sometimes be very helpful, but in practice it will probably have a lower priority. It can be much more interesting to have the moves printed. At any time, i.e. during a game or at the end, you can press the keys »P« and »R« to print the moves of the game out on paper. If you used the "Change Position" function during the game, the printer prints out the change of position first, then the subsequent moves. Aborting the printout is possible by pressing any key – allowing you to change your mind. To print out each move immediately after execution, press the »P« and then »T« button. The message "LISTING ON" appears. The function is switched off by pressing the two buttons again. It may happen that you have accidentally pressed the »P« key. Please do not panic!!! Pressing any other key than »B«, »R«, »T« or »SHIFT« returns you to the game without any printout. The 48K version of the program also has the ability to save moves or game situations to tape, allowing you to load them back in later and continue. By pressing the »T« (tape) button and then pressing the »S« button, you can save the current state. Recording starts as usual after starting the recorder by pressing any key. To load a saved game, proceed as follows: Press the key »T« and then »L«. As always if you pressed the »T« key by accident, you can escape by pressing any key except »S,« »L,« or »SHIFT.«

So far from me about the chess program "Cyrus IS Chess". What is left to say? The program is in my opinion quite suitable for the untrained and semi-professional player. However, like all chess programs of that time, it has the drawback that it is usually designed to simplify the situation due to limited resources of computing power, i.e. whenever possible, Cyrus will take an enemy piece, even if that would mean having a disadvantage later in the game. The available difficulty levels are quite suitable to have a closer look at chess problems. However, you should bring a lot of time with you, since the Spectrum is not quite a "Deep Blue" computer and the calculations therefore may take quite a long time. Something I had to get used to was using the cursor keys to move around – other programs do better by allowing the direct input of a position using its coordinates (row and column) on the board. I think in summary you can be quite pleased with the program. There's nothing really stopping you from playing a nice little game of chess! That's all from my side for today.

THE FIRST SPECTRUM MEETING IN SONNENBÜHL - A RETROSPECTIVE

The Morning

The first Spectrum meeting in Sonnenbühl that took place on the 21st of April in 2018 started – for me being the organiser – as early as 6:30. The venue had been chosen carefully, with the community hall being clearly visible and easy to find at the main road of Willmandingen, a part of Sonnenbühl. Parking spots were (and are) plentiful, so the place was ready to receive the guests.

Luckily, I had booked the place early – with Protestant confirmations scheduled for the Sunday after, the venue was pretty much in demand.

As not much was prepared by that morning – no tables and chairs set up, power supplies and cabling still to be prepared, I packed my car with all the essentials - mainly myself, beverage, tableware, various food supplies, the requisitioned coffee machine and all the computing hardware I wanted to use myself during the meeting and drove

Community hall in Sonnenbühl-Willmandingen

down the 350 meters from my flat, opened the door and arranged everything in the empty hall.

The empty hall of the Community hall

Briefly before 7:30 I picked up the rolls I had pre-ordered at the local bakery, and once back, I could already see the first visitor's car.

Schombi, (the guy known to be hiding his horns under a bandana) happened to be the first guest. He dynamically helped me setting the place up, and just before 8 we were prepared to face the rush of all the Spectrum visitors.

The Interview

Prior to the meeting, I had given notice to the Reutlinger Generalanzeiger (GEA), the largest local newspaper, to place a bit of free advertising for the meeting and the Spectrum User Club.

The feedback from the newspaper was actually close to enthusiastic, and I got the feeling they had just waited for my call. Thus, on the 13th of April, I received a visit from Mrs. Geiger, a GEA reporter with a photographer in tow, who took photographs of my retro collection (including my-

Mrs Geiger at work

self). The lady was about my age and had apparently not the slightest clue about computers. I could have told her stories about colours of bits and the need to refill the colours before a reset – but I didn't, I was a nice guy.

Before the interview, I had arranged some exhibits of my computer collection on a table, to make a bit of an impression. The lady was appropriately impressed. Soon Thomas Eberle, the SUC Mastermind, joined the interview and didn't miss the chance to introduce the Spectrum User Club.

Nearly three hours later, the interview was finished and my computers and I had been sufficiently photographed.

When the interview was published Thursday before the meeting, I was pleasantly surprised by everything I apparently had said, but couldn't remember…

Thomas during Interview

The first sentence in the story was: "Joachim Geu-pel is a real Computer Freak". I must remark I've never considered myself a freak, but rather as conservator of technology that has its origins in the abacus and its successors in today's PCs.

I also deny any allegations of having mentioned the "Breadbin", as I must admit I still hold up traditional competition to the C64.

My offer to review the article before publishing was not honoured, so there are still some factual mistakes and misunderstandings – feel free to hunt them, they are easy to spot.

(The GEA article can be found below)

The Meeting

During the next two hours more and more punters arrived, and to my greatest pleasure two friends from the Netherlands I had met in Wittenberg were among them.

We hadn't set up an agenda for the meeting, so there were no presentations or talks. No more were there any Commodore protesters which is a bit of a pity in hindsight; I'd like to have seen a company of police officers break up that demo…

The empty hall of the community hall

The room was filling up and soon we had to rearrange the tables to better use the space. Not only the usual Spectrums were shown and used, but apart from my own "MiSt" a ZX Uno, a Q68 and two Spectrum Next (boards) were to be admired. Apart from SUC members and other "usual suspects", we were also able to welcome some local guests who had read the GEA article and were interested in the Spectrum or retro computing in general.

Of course, all the new items brought along were thoroughly investigated, SINTECH had colourful Spectrum cases on sale, ideally suited for the new PCB replicas that are now available.

To sum it up, the meeting ran smoothly and calmly. Being able to see the various pieces of ZX tech was exciting. Being the organizer, I unfortunately didn't have enough time to follow all discussions, but had an interesting discussion on the Sinclair QL, marveled at the Spectrum Next PCBs and incidentally managed to wreck my Disciple interface. Visitors attracted by the GEA article who found their way to the meeting were welcomed and directed around. One of the punters seized the opportunity to show his son what devices were eating up most of his free time when he was young. Others just wanted to shortly peek in and have a look, but in the end stayed for quite some time, having fallen for the retro technology.

One guy brought his own Retro-PC, a pre-Windows relic, as a donation to the SUC. The device was bought in 1985 and used for a long time.

Being carefully maintained, it still looks like new today. The CRT shows some faults; very probably some capacitors need to be replaced. In case someone is interested, the computer can be picked up from my place.

The meeting came to an end at about 20:00. But the final closure happened in a nearby restaurant where we had reserved a hall and ended the day with some good food and drinks, discussing just about everything, including the US President… We parted around midnight ending the unofficial part of the meet-up.

One of my personal highlights occurred the next day, however: I found a well-filled envelope on my living room desk. The letter contained an article in French that was composed by an elderly gentleman and published in a French Club newsletter. It described the development of a piece of keyboard decoding logic in the 50's. This piece of logic is larger than the ZX Spectrum and consists entirely of vacuum tubes that had to be pre-heated before put to service. The article was accompanied by a letter from the now 84-year-old author who congratulated us on our fascinating hobby and wished us all the fun.

Link to »Mainframe Tube Module«:

»http://www.righto.com/2018/01/ibm-mainframe-tube-module-part-ii.html«

In retrospect to the meeting, I can sum it up as follows: Demanding as it was the first meeting I happened to organise, but pleasantly enjoyable. This is also confirmed by the feedback I have received so far. I would like to thank Thomas Eberle, who industriously helped with the preparations.

In conclusion, I'd say the first meeting in the south was a complete success. I plan to set up another one next year, this time for two days, as this one was clearly showing evidence of interest.

Joachim

All who were there - the inevitable group photo

NEWSPAPER ARTICLE: REUTLINGER GENERAL ANZEIGER 19. APRIL 2018

Computers – Joachim Geupel of Willmandingen has a crush on computers of the 80s. Meeting on Saturday

By JULIE-SABINE GEIGER

SONNENBÜHL-WILLMANDINGEN.

Adored Breadbin and Door Stopper

Joachim Geupel is a real computer freak. Who else would stuff his man-cave with the electronic brains from the 80s, the outset of the home computer, would adore renowned scientist's products of the past, collect and connect them, study their innards, connect them to modern flat-screens and storage media and use various pieces of modern equipment to stimulate them to miraculous performance.

„There's quite some folks like us all over Europe", states the electrical mechanic. Geupel has organised a Sinclair enthusiast's meeting for Saturday, the 21st of April in the Willmandingen Gemeindehaus.

"Everyone who has a passion for old Sinclair or Commodore computers is welcome", Joachim Geupel announces the open and tentative meeting. "Nearly all of them are genuine 1980s", Geupel introduces his impressive collection. The TI99/4A by Texas Instruments, a 16-bit home computer of 1980, tenderly called "Ninety-niner" by its fans. Next to it a Sinclair ZX81, "based on its predecessor Z-80 CPU by British manufacturer Sinclair. To be had starting from autumn 1981 for 400 Marks". Continuing: „On behalf of this invention, Clive Sinclair, the universal genius, was knighted by the Queen. The device was a masterpiece, could even be had as a kit". Thus the "door stopper" (for its blocky shape) was ideally suited for the tinkerers – "There are clubs that equipped the box with wheels to make it roll, others replace the antenna jack with modern interfaces and tune the original 1Kbytes of memory to four megabytes"

While early home computers up to the Commodore 64 (the "bread bin" that made the PC suitable for the masses in the 80s) were black-and-white only (had blocky black characters on white background), with graphical user interfaces like Windows being a thing of the future, the next generation could create colour video. Joachim Geupel demonstrates the rapid development from simple characters consisting of a few pixels towards stunning graphics on modern flat-screen displays that cannot even be used to their full extent by those early pioneers with their, by today's measures, minimal performance. Even within these limits the tinkerers and amateurs manage to create animated graphics using their programming language BASIC.

Joachim Geupel highlights his Atari STE from his computer museum: "Developed in 1985, in the shops starting from 1986, this could even do Desktop Publishing" (graphical page design). Its original performance would be considered slow motion today. The friends of retro computers extend the capacity, even write programs of their own, graphical demos and games: "Just to see whether I can manage".

Programming in BASIC and C – Clearly the electronics technician that taught for quite some time and thus knows the development of computing devices since the ancient world, solders his own PCBs and is easily able to display frequency analysis on his screen.

The friends of early home computer development are all fluent in multiple programming languages,

Rechner – Joachim Geupel aus Willmandingen hat ein Faible für 80er-Jahre-Computer. Szenetreffen am Samstag

Verehrter Brotkasten und Türstopper

VON JULIE-SABINE GEIGER

SONNENBÜHL-WILLMANDINGEN. Joachim Geupel ist ein richtiger Computerfreak. Wer sonst würde sich sein Denkzentrichen mit den elektronischen Gehirnen aus den 80er-Jahren, den Anfängen der Heimcomputer, vollstopfen, die Entwicklungen namhafter Techniker von einst verfolgen, sammeln, ihr Innenleben studieren, sie koppeln, an moderne Flachbildschirme und Speichermedien anschließen und mit allerlei modernem technischen Equipment zu sagenhaften Leistungssteigerungen animieren. «Wir sind doch einige in ganz Europa», antwortet der Elektromechanikermeister grinsend. Für die nächsten Liebhaber der Sinclair-Szene hat Geupel am Samstag, 21. April, ein Treffen im Willmandinger Gemeindehaus organisiert. «Alle, denen Herz für Sinclair- oder Commodore-Computer schlägt, sind willkommen», macht Joachim Geupel auf den offenen wie unverbindlichen Treff aufmerksam.

«Fast alles Originale», verweist Geupel auf seine stattliche Sammlung. Den TI 99/4A von Texas Instruments, einen 16-Bit Heimcomputer von Anfang 1980, von seinen Fans «Neunundneunzigerer» genannt. Daneben den Sinclair ZX81, «so auf dem Vorgängermodell Z80 Mikroprozessor basierender Heimcomputer des britischen Herstellers Sinclair. Den gab es im Herbst 1981 für 400 D-Mark.»

Von der Queen geadelt

Geupel weiter: «Für seine Erfindung wurde Clive Sinclair, das Universalgenie, von der Queen geadelt. Das Gerät war ein Geniestreich, das gab es sogar als Bausatz.» Damit war der «Türstopper», wie der ZX81 wegen der blockigen Form genannt wurde, ideal für die Tüftlerszene. «Es gibt Clubs, die haben dem Kasten Rollen angebaut, auf denen er fahren kann. Andere ersetzen das Antennenkabel durch moderne Schnittstellen und motzen den Ein-Kilobyte-Speicher auf 4 Megabyte auf.»

Hatten die Anfänge der Heimcomputertechnik, bis zum Commodore 64, der «Brotkasten», mit dem der Personal Computer (PC) in den 80er-Jahren massentauglich wurde, noch alle Schwarz-Weiß-Bildschirmausgaben, also schwarze eckige Zeichen auf weißem Grund, weil die Bezeichnerflächen à la Windows, wie heutige Anwender sie kennen, erst später kam, hatten die nächsten Generationen schon farbige Ausgaben. Joachim Geupel demonstriert die rasante Entwicklung von den einfachen binnenlegten Zeichen, die aus wenigen Pixeln bestanden, bis zur Grafik an sich verändernden Demobildern auf modernen Flachbildschirmen, deren Größe die Pioniere mit ihrer an heutige Maßstäbe angelegten winzigen Rechnerleistung gar nicht ausfüllen können. Dennoch schaffen es die Tüftler und

Das sind nur ein paar: Joachim Geupel ist Feuer und Flamme für historische Computertechnik, und der ist experimentiert. KOSTA MEYER

Bastler mit der Programmiersprache Basic, Bewegung auf den Bildschirm zu bringen.

Joachim Geupel weist in seinem Computermuseum auf seinen Atari STE hin. «1985 entwickelt, seit 86 zu haben, konnte der schon Desktop Publishing», also die rechnergestützte Seitengestaltung. Seine Originalgeschwindigkeit wäre heute Zeitlupe. Der Freundeskreis der musealen Rechner aus der Vorzeit von Microsoft erweitert die Kapazitäten und schreibt sich auch die Programme für die Grafikdemonstrationen und Spiele selbst. «Um zu schauen, ob ich das hinkriege.»

Programmieren in Basic und C

Klar, dass der Funkelektroniker, der lange ausgebildet hat und daher die Entwicklung der Rechenmaschinen seit der Antike kennt, seine Leiterplatten selbst ätzt und zinnt. Frequenzgang wie eine Parabel auf dem Bildschirm wachsen lassen kann. Die Freunde der Anfänge der Heimcomputerentwicklung sprechen alle mehrere Programmiersprachen, natürlich. Geupel zählt zu Basic die Ober-Jahre-Sprachen Pascal und C auf, studiert Fortran. Die kann auch Thomas Eberle, seit 1994 der Vorsitzenden des 1983 gegründeten Computervereins, den Joachim Geupel telefonisch datzuschalten.

Wie Joachim Geupel, der die Redaktion der Mitgliederzeitschrift des «Spectrum-Userclubs Wuppertal» hat, die natürlich auf einem der Oldies gemacht wird, schwärmt auch Vorsitzender Thomas Eberle von den Errungenschaften der Pionierzeit, die unter anderem den Mikroprozessor hervorgebracht hat, der die Entwicklung erst richtig angetrieben hatte. Fast klingt es, als blätterten die beiden Männer in einem Fotoalbum, während sie sich die Computerbauarten der 80er-Jahre wie einen Ball hin- und herspielen. Vom Apple bis Olivetti, «da hab ich ein Pollmilupiel drauf», freut sich Joachim Geupel. Was bereits ein Meilenstein in der grafischen Darstellung war.

Dass der Club wächst, erzählt Eberle. Rund 5 000 Mitglieder habe die Community weltweit. Leute seien das, die wie er als Studenten ihre ersten Heimcomputer hatten. «Die einen bauen sich dann die Einzelnen auf, seien die Kinder groß sind, andere holen ihre alten Rechner hervor.» Mittlerweile können vollständige Familien zu den regelmäßigen Klubtreffen, «da geht es dann nicht mehr nur um Computer», betone Joachim Geupel die gemeinsamen gemütlichen Abende. «Inzwischen bekannt sich schon die vierte Generation dazu». Die Hilfsbereitschaft untereinander sei enorm. Wenn etwas repariert werden muss, wenn Ersatzteile gebraucht werden. «Beim jüngsten Treffen in Winterberg hatten manche ein ganzes Elektronikbasar aufgebaut.»

Zeigen, was man hat

Das Treffen des Spectrum-Userclubs am Samstag, es ist zum ersten Mal in Willmandingen, dient dem Austausch, dem Zeigen, was wer dabei hat, und natürlich dem Treffen. Unter den Angemeldeten sind Gäste aus den Niederlanden. Joachim Geupel und Thomas Eberle wollen mit einer Attraktion locken, von der sie hoffen, dass die Neuheit dann schon ausgeleiert sein wird. Der ZX Spectrum next aus dem Hause Sinclair. Eine Neuauflage des 8-Bit-Klassikers, mit Z80-Chip, zahlreichen Video-Outputs und einem SD-Karten-Slot, der auch Originalspiele per Kassetten-Player verarbeiten können soll. Entwickler Henrique Olifiers und ein Team sollen für die Finanzierung der Neuauflage von Sinclairs Heimcomputer ZX Spectrum eine Crowdfunding-Kampagne gestartet haben, die dem Vernehmen nach nur wenige Tage gebraucht habe. Solle der Klassiker am Samstag noch nicht zur Verfügung stehen, «können wir die Platine vorstellen», kündigt Geupel ein fast so großes Spektakel an. «Das wird ein ziemlicher Spaß» ist er überzeugt. (GEA)

COMPUTERCLUB-TREFFEN

Am Samstag, 21. April, ist das Treffen des Spectrum User Club, im Gemeindehaus im Sonnenbühler Ortsteil Willmandingen. Es beginnt um 8 Uhr und dauert bis 20 Uhr, danach beginnt der gemütliche Teil mit einem Abendessen. Eine Anmeldung ist nicht erforderlich. Weitere Information hat Organisator Joachim Geupel auf seiner Homepage, und gibt es auch auf der Homepage des Clubs. (jg)

www.spectrum-userclub.de
www.joggysoftware.de

obviously. Geupel lists BASIC, the 70s languages Pascal and C, as well as Fortran (This must have been a misunderstanding: I don't know any Fortran!).

This is also the home turf of Thomas Eberle, chairman of the club that was founded in 1984 – He is connected via phone. Just like Joachim Geupel, who is the editor of the "Spectrum User Club Wuppertal" newsletter, Thomas Eberle raves about the achievements of these pioneering days that yielded the microprocessor that really stimulated development.

It sounds like the two men were browsing a photo album while the toss the computer series of the 80s between each other. From Apple to Olivetti „I got a football game on that one", beams Geupel. That being a milestone in graphical rendering.

„The club is growing", states Eberle. The community consists of about 5000 members world-wide. These are people who, like him, owned their first computer when they were students. "Some drive their model trains once the kids have grown up, others get out their old computers".

Nowadays whole families join the regular club meetings. "It's not all about computers", Joachim Geupel notes about the regular club meetings, "Meanwhile the fourth generation occupies itself". Willingness to help each other is enormous. Whenever something needs to be repaired, or spare parts are needed. "At the recent meeting in Wittenberg, some had brought complete electronics labs."

Show what you have.

The Spectrum User Club meeting on Saturday serves to exchange, show who has got something rare, and, obviously, the social event as such. Among the registered visitors are guests from the Netherlands. Joachim Geupel and Thomas Eberle intend to bait with a new attraction, hoped to be available by then: The ZX Spectrum Next by Sinclair. A new edition of the 8-bit classic, with a Z80 chip, lots of video outputs that will be able to digest classic games via a tape player. Developer Henrique Olifiers and his team are reported to have started a crowdfunding campaign that reportedly only took a few days to succeed. In case the classic will not be available by Saturday, "we can present the circuit board", announces Geupel, convinced "That is going to be fun".

(GEA)

Photo of me in my playroom

COMPUTER CLUB MEETING

Saturday, 21st of April, is going to be the Spectrum User Club Meeting in the Gemeindehaus in Sonnenbühl-Wilmandingen. Venue opens at 8 until 20:00, followed by a social event and dinner. Registration is not required.

Further information is provided on Joachim Geupel's homepage, as well as the Club's homepage. (jsg)

THINGS TO FIND...

ABOUT »FREAKS« AND OTHER TOPICS

A SATIRIC REFLECTION

Dear friends and comrades, fighting against forgetting old, older and oldest Home computers from genius and same-name Founder Sinclair, to be specific: »Sinclair Research LTD«.

Dear Friends, and I mean both male and female!

Considering that we are all united by a common interest in said electronic data processing device, the electronic calculator called "Sinclair ZX Spectrum";, in modern language generally also called "Home-Computer", its Nickname "Speccy", I ask you for permission to renounce the formal "you"; for the time being in order to use the comradely "you" instead. Anyone who has an objection to this, I ask you to indicate this with a

show of hands! … No hand signals??!I So I thank you for your help!

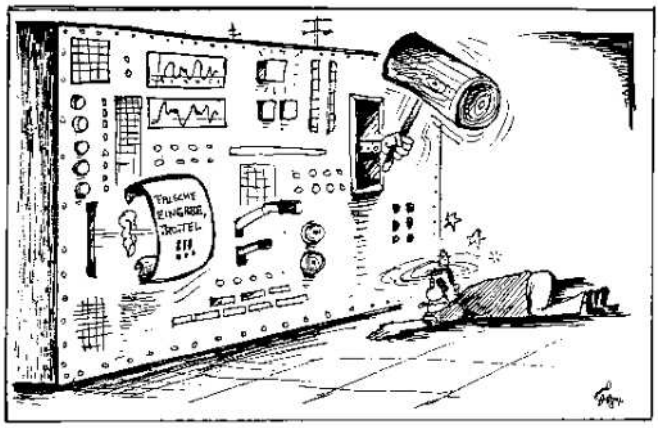
Dear comrades!

There was an event of the Friends of the "ZX Spectrum" in Sonnenbühl-Willmandingen in Germany. Some days before this event I was visited by a journalist, she interviewed me in terms of Home Computer. The lady gave me three hours with her presence, and I could have told her that every processed Bit in the Computer has a different color, because this lady did not have the slightest idea about old computers, which she freely admitted.

Her article appeared a week later in the Reutlinger General-Anzeiger. In the first sentence, she referred to myself as a "proper computer freak", although I've never seen myself as a Freak.

The article inspired me to consider the use of language in terms of "Computer", especially the meaning of the Word "Freak". In the past language use, the crippled, crazy, or abnormal people are referred to as »Freak« (Wikipedia). Also people that are particularly enthusiastic, enjoying a Hobby excessively and "beyond the norm", sometimes are referred to as a "Freak".

Since I never have considered myself, as I said, as a "Freak", I put my attention to the Computer magazines from the past, as well as the monthly Loose-leaf collection of the "Computer Club Wuppertal". In reading the Computer magazines it immediately jumped out at me that the term "Freak" is deeply rooted in our language. I want to tell you, dear comrades, about the neologisms and synonyms in connection with the term "Freak", and almost in the same breath, explain the term.



»Freaks« : (sometimes named as Geek)

»Freak«, in General, as the »common Freak«. He is to detect in outbursts of emotion, associated with uncontrollable Tremors, and the Launch of quiet high-peaks of yelling.

»Computer-Freak«:

It's a popular generalization. A »Computer-Freak«, as well as the »Freak«, to recognize the outbursts of emotion. A »Computer-Freak« on Computer-deprivation is forced to tap stick around on a pocket calculator, or the desperate, chewing on a smartphone.

»Spectrum Freak«

also known as »ZX-Freaks«: Freaks of the different models of Home computers with the brand of »Sinclair ZX Spectrum 48, 128, 2, 2, and 3«, as well as the predecessors of the same, the »ZX80«, and the »ZX81« in an enthusiastic way. It should be noted that the mortality rate due to malnutrition is extremely high, since the said "Spectrum-Freaks" criminally neglect their food intake.

»Eraser Freak«

A special place is dedicated to the "eraser Freak". This is a special form of the "Spectrum" or "ZX-Freaks", who consider next to the ZX Spectrum 48 to collect domesticated erasers, to pay homage to these and to multiply. This is because the keyboard of the ZX Spectrum 48K has rubber keys.

»Atari Freaks« and »Atari XL Freaks«

This is a group of Freaks, who specialises in the use of Atari 8-Bit computers. Easy to recognize due to their cowls in the Form of the Atari Symbol and a Tattoo in the Form of a Atari XLs Logo on the forehead.

»C-64 geeks«, »64-Freaks«, »Commodore Freaks«, »VIC 20 Freaks«, »CBM 64 Freaks«, »Top-Commodore-Software-Freaks«.

A special group within the group of »Freaks« in General and in Particular. This group has made it their mission to help the Commodore C64 to

world domination and to the only valid world Religion. This is shown by particularly aggressive missionary work, even before the Bank employee does not shrink back. Where the cowls are the habit for the »Atari Freak«, the »C64-Freak« has the ever-present willingness to fall on their knees in front of the bread box, even singing strange songs in the form of click voices. Extremist groups are said to have human sacrifices. Be warned of this group of Freaks, because it is believed that they are highly infectious, reminiscent of the key phrase »Computer-Virus«.

»TI99/4A-Freaks«

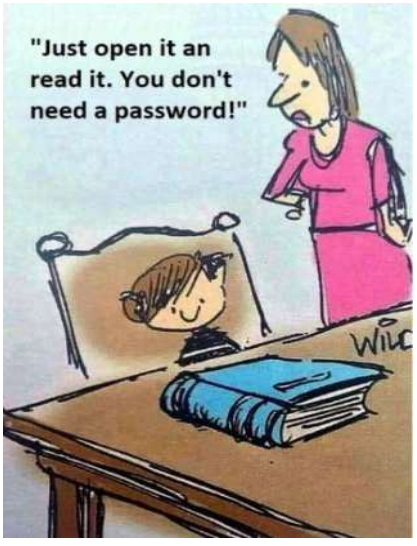
A phenomenon of »Freak« that has specialized in a highly developed computer, that however, due to strange programming of the operating system is very slow. This group in contrast to the »C64-Freaks« is peace-loving. It is difficult to distinguish from so-called »normal people".

»Dragon Freak«

The common »Dragon Freak« is evident from the fact that s/he approaches his/her Dragon-Computer only in fire-resistant clothing, as he/she lives in constant fear of said »Dragon« first grilling then devouring. The »Dragon Freak« is considered harmless and is also extremely peaceful. These Freaks are referred to as a sub-group of »common Freaks«

»Software-Freak«

The »Software Freak« or »Software-Geek« is concerned solely with »soft goods«, i.e., paper tissues and cotton wool. This "Software" develops to the strangest and most curious forms, however, are of no more use anymore. He/she finds himself incredibly, all the others hold him/her for the indescribable.



»Coder Geek, Coder Freak«

The exact opposite of the later mentioned »female Geeks«. However, this is only in connection with programs and executable applications. A source that comes in the vicinity near a »Coder Geek« immediately transforms the source code into an absolutely illegible and extremely difficult-to-use program. The »Coder Geek« is one of the most unpopular Freaks, often loathed, and hated. In contrast to the »female Freak«, the »Coder Geek« is a real phenomenon.

»Game freak«

Practices the Playing on the Computer as a Religion. Only consuming Pizza and Cola. Is considered to be physically immobile due to the consumption of too much Pizza and Cola. Has thickened hand and enlarged thumb through a physical-evolutionary adaptation to the pleasure pen, the »Joystick«.

»Gambling den Freak«

The special form of the »game freak« is the »game-den-Freak« or »Game-House Freak«. He/she will be treated by the common »game« or »games Freak« with contempt, because he/she is considered to be less intellectual. The gambling Geek has a great survival experience in the jungle of the games and is washed with all waters – both alcoholic and non-alcoholic! Enjoys the reputation of »Indiana Jones of the game freaks«, however, is less smart.

»Donkey-Kong-Freak«

is a sub-group of the »game Freaks«. Fan of the game »Donkey Kong«. Was honoured with the environmental prize for the preservation of the Gorillas in the Computer games. The »Donkey-Kong-Freak« is a nature reserve, but is nevertheless threatened with extinction.

»Demo Freak«
As soon as a crowd gathered, the "Demo Freak" is easy to be found. The Demo Freak is easy to recognize because he/she carries banners and posters with pictures of computers around, and launching shouts of »Free ZX81« or »Sir Clive for President«. Sometimes the upward-curving posters and banners are interactive. The different images and moving graphics are there to see, which were programmed by the Demo-Freaks in there.

»PEEK - and POKE-willing Freaks«
Freaks, popping up in each group and sub-group of the "Freaks" out of nothing. Features, at any time, willing PEEKing and POKEing of Everything and Everyone. Has NOTHING to do with any strange and ominous sexual practices. »PEEK – and POKE-willing Freaks« are considered to be interdimensional beings that can switch by said capacity between the universes, back and forth.

»Hardware Freak«
Hardware Freak is similar to the »Gods In White«. In General, the last rescue in the event of acute illness or comatose phenomena on a computer. Is adored by all Freaks, and loved – but in the opposite-train want to earn a lot of bucks. Drives Porsche or Ferrari, and playing Golf, with the Golf-Caddy is modified with moderately powerful 900-HP engine.

»Hardware-extension-Freak«
Subgroup of the »Hardware Freak«. The »Hardware-extension-Freak« immediately wants to stick extensions to every available Computer, instantly and directly. Caution! It is often armed with a Hot-glue-gun weapon, he/she is also ruthless to use it mercilessly!
Be expressly warned.

»Transistor-Freaks«
Is considered to be extinct. However, it is possible that he has survived in several biotopes, similar to the coelacanth in the deep sea. Evolutionarily, the »Transistor-Freak« was replaced with the »IC-Freak«, after this the »microprocessor-Freak« appeared, followed by »micro-Controller Freak« to the »Raspberry-Pi-Freak«. There are hints that the »Transputer-Freak« and »Risc-Freak« evolutionary are connected, however, these are not documented and are associated as conspiracy theories.

»Telex-Freak«
To be recognized by hearing protection system that is fixed axes with the scalp. Speaks only in short and choppy sentences, ending with a end-of-line sound like a typewriter.. The main occurrence area of the »common warehouse«, a biotope, in which he/she has to settle because those Telex devices occupy much space, and solely on the basis of its existence, the surrounding space-time is bending, causing a hell of a noise.

»Price-Conscious Freak«
Mutation of the »common Freaks«. Occurs occasionally, but due to his frugal penny-pinching, is not able to live. Tends to ritual suicide as the free-living Lemming.

»Female Freak«
Regarded as a Mystical figure. To compare with the Yeti of the Himalayas and the American Ur-inhabitants. It is said that those female freaks have mystical to magical powers, immediately resolving any program into a neat commented Source code. Also, desperate programmers are healed and redeem from their suffering, only by imposition of hands. The existence of the »Female geeks« has not been proven, therefore will be assigned to the mythical world.

Ladies and gentlemen, dear friends,
This is the short excursion in the world" freaks "ended for the time being. It is to assume that current freak-research encounters more appearances and more freaks, living free in nature.

Dear friends of the present. As you perhaps know, the term "Freak" is a term frequently used in the Computer magazines of the 80s. In this time any person who dealt with home computers of the time, was referred to as "freak"and "geek". In the

first ten issues of the computer magazine" happy computer " this term is to be found inflationary. It is also very often found in the monthly Club release of the »Spectrum User Club Wuppertal«.

Latest results of the Freak-research are currently being compiled, according to a further evolutionary leap of the "Freaks" in General and in Particular. There are clear indications that some of the individually listed »Freak« populations are mixing up to a new type argument, which is described under other names, provisionally, as a »Nerd«.

However, it can be obviously assumed that the "Nerd" will displace the »Freak«. If not, »Freak«, »Geek« and »Nerd« will result in a co-existence similar to the monkey, our evolutionary ancestors, and of the common people.

Dear ladies and gentlemen, I thank you for your attention and would like to leave this stage now.

Thank you for your attention!

Yours, Joachim Geupel

Here is a short postscriptum:

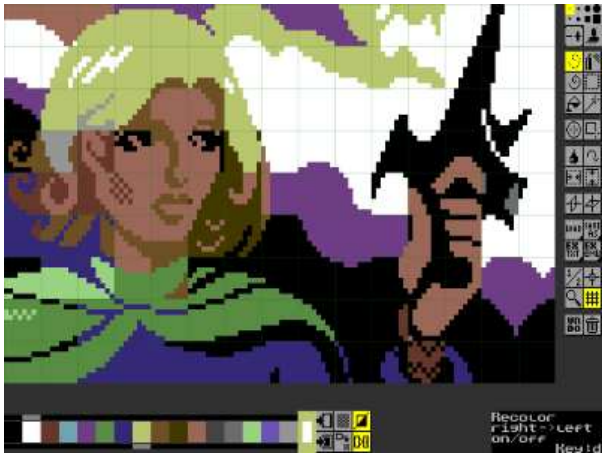
I found all forms of freaks looking for material and articles in old computer magazines and the old Club contributions in the magazine of the »Spectrum User Club Wuppertal«. Inspired by the article in the Reutlinger General-Anzeiger, where I was referred to as a freak - which admittedly has annoyed me - this article was created. I found »Freak«-Material especially in the flea-market and the classifieds, the editors of computer magazines also almost did an inflationary deal with this term »Freak«.

The terms are found in the mentioned sources, the interpretations are freely invented by me (JG)

MULTIPAINT & PIXELPOLIZEI

Both are programs for retro systems in general, and both were published first in 2016, and, on a closer look, go together very well. (jg)

MultiPaint is a graphics program said to relate back to one of the best graphics programs for the Amiga.



You could argue that any graphics program relates back to some older programs and ideas, and it didn't all start with the Amiga – but there were amazing new ideas coming up with this platform. As an end user of graphics programs, especially for the Spectrum, I always wonder: what is new, what functions are in there, and, last but not least: do they operate well?

We start MultiPaint by loading a picture with SCR or PNG or starting from scratch. When working with the program, you first have to get used to the old-fashioned-looking icons – best to simply try them out.

Compared to existing PC graphics programs MultiPaint is set back a bit by this, icons in retro programs don't necessarily have to look old-fashioned. An interesting feature of MultiPaint are its special tools for horizontal and vertical mirroring that can be activated simultaneously, beyond that there are no big surprises, though. One icon I first identified as magic wand which is not uncommon these days, but that was wishful thinking and is not part of the program. Apart from that, not everything needed by the Spectrum artist is provided; I was missing the eye-dropper and I found it difficult to draw in existing pictures over differently set attribute fields. But maybe I simply didn't find the corresponding function. The manual (in pdf, contained in the zip file) describes these as well as the keyboard shortcuts in detail. This PDF has been prepared in an exemplary manner which is not really common in our hobby. Please consult this file before testing the program.

Conclusion: I don't consider MultiPaint the revolutionary change in my selection of programs where TommyGun currently occupies the pole position, and RetroX and SevenUp deserve an honourable mention for specific requirements. But whoever needs to create pictures for various

platforms might find it a useful amendment to their toolbox.
The program can be found using one of the links in Pouet.net.

Onto PixelPolizei – I really don't know why the term „Polizei" seems to be so well-known across all countries. The program checks whether specific pictures can be displayed on specific platforms and scales them to the target format. The load button recommends PNG or GIF, but I was able to import nearly everything as a picture. Thus you can load and view a picture in some weird format, check it for displayability, and store it in the target format. There is extensive documentation available on the project's home page:

http://www.kameli.net/marq/?page_id=4557.

You can also download the newest version from there. The program does not come as a converter tool, however, as there are specialized programs for this purpose, like »RetroX«.

If you have painted or converted nice pictures for the Spectrum, feel free to send them to me, by the way, Scene+ has room for that as well.

Many Greetings, Mirko

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ADVENTURE SOLUTION

»EXCALIBUR – SWORD OF KINGS«

Hi Adventure friends,

once again I have dug out a Spectrum adventure game we will look into and solve.

This article concentrates on »Excalibur - Sword of Kings« by Alternative Software in 1987, the high tide of the ZX Spectrum. The adventure was written by Ian Smith and Shaun G. McClure using the well-known Professional Adventure Writer. The game features some graphics but is mainly a text adventure with detailed location descriptions, but generally a rather easy game. This reflects in my article dealing with only 28 locations. Don't assume the game is too easy, though. If you have played this game before, you will know that not everything is too obvious. This solution is for everyone who is still stuck somewhere or just wants to play through the game.

Before looking in the locations and items, a few words on the background story:

The story takes place in the small English town of Alter.

Many months have passed since King Arthur and his noble knights have left Camelot in search for the Holy Grail. Suddenly a dark cloud appeared above the town that emitted blue lightning.

A strange woman emerged from this cloud wearing a dark robe. She demanded an audience with King Arthur Pendragon, requesting the whereabouts of Merlin, the great wizard, adding his powers to hers. Arthur told her that Merlin was on a secret mission, but the foreign lady didn't buy into this and revealed herself as »Craina«. She was an evil enchantress and threatened Arthur with his death in case he wouldn't reveal Merlin's whereabouts. Arthur drew Excalibur and hauled a deadly swing towards her. But Craina was prepared and before he could even react, she had cowardly wrapped him in a mean dream spell. This transformed proud Castle Camelot into a dark place that holds the King and his sword captive until Craina is defeated.
Merlin thus assigned us with the following task:
Search for Camelot and conquer the castle, find Excalibur, defeat Craina and save King Arthur.
But mind the dangers you will meet on your quest and defeat all mean enemies. It is on you whether King arthur will be saved and Camelot will return to be a lively place full of joy and strength.

1. In a ramshackled hut / ladder
2. On a grass borderedtrack
3. Where the road twists eastwards

4. On a rutted gritty track flanked by lush pasture / crimson fish
5. On a dusty path skirting the edge of Birwood
6. At the foot of a large stone tree
7. In a stone room set in a large petrified tree / short sword
8. Where the path branches to the east and continues south towards a chasm / woman selling lamps
9. On the edge of a huge chasm
10. On the edge of Birwood
11. Deep inside Birwood / pile of logs, axe
12. On the mossy floor below the canopy of leaves / bush, ivory key
13. In a dip in the road by dark Birwood / dark demon knight
14. A fair distance from Birwood
15. Outside a now foreboding looking Camelot
16. In the porch of Camelot
17. In an abandoned banquet hall
18. In a draughty room / old trap door
19. In an ornate antechamber / coin
20. In a old salt mine
21. In the southern part of the mine / rock-worm
22. At the end of the mine / some salt
23. In a bitterly cold room / can of oil, ice creature
24. In the winch room / winch
25. In the armoury / Excalibur
26. In a small dingy room
27. In the most splendid room of the castle / spell from Crania
28. In a sparse and lonely room / King Arthur

This concludes all the locations we will find on our way. Now follows a step-by-step solution with some hints for players trying on their own.

Let's get going...

GET LADDER, N, N, E, E, N, PROP LADDER (to the stone tree), UP, GET SWORD, D, GET LADDER, S, S, S, BREAK LADDER (this gives us a sort of balancing pole useful for traversing the chasm), DROP RUNGS (no need for these), CROSS CHASM, S, GET LOGS, EXAM LOGS (we find an axe), DROP LOGS, W, EXAM BUSH (we find a key), GET KEY, E, N, CROSS CHASM, N, E, ATTACK KNIGHT (we can de-feat him with the sword we found earlier), E, E, UNLOCK DOOR, OPEN DOOR, E, E, S, E, GET COIN (now we need to get back to the old woman sell-ing the rags), W, N, W, W, W, W, W, BUY LAMP (off we go for the castle), E, E, E, E, E, S, SMASH TRAPDOOR (with the axe), D, S, LIGHT LAMP (this defeats the stone worm), S, GET SALT, N, N, U, E, E, THROW SALT (which melts the ice monster), N, E, GET EXCALIBUR, W, S, GET OIL, N, OIL WINCH, TURN WINCH, S, W, W, N, N (the gate is now open and we can go north), N, REFLECT SPELL (using Excalibur), W, WAKE ARTHUR.

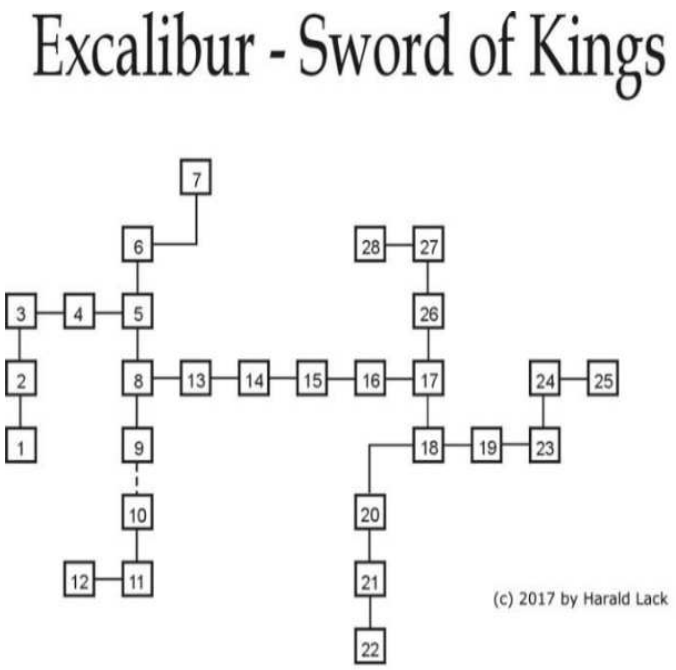
And we're done.

English summary:

Dear Spectrum users,

As you might have guessed, here is another adventure solution for you. Today I will take a look at the game »Excalibur - Sword of Kings« published for Spectrum by Alternative Software back in 1987. It is a graphic adventure written by Ian Smith and Shaun G. McClure with good location descriptions but in all one of the more easy to solve games. On the way through the game we visit some 28 locations, so it is not too big at all. But this does not mean that it is too easy. Here is the story behind the game.

The adventure takes place in the little town of Alder. Many months ago the Knights of the Round Table have left Camelot in search for the holy grail. Suddenly

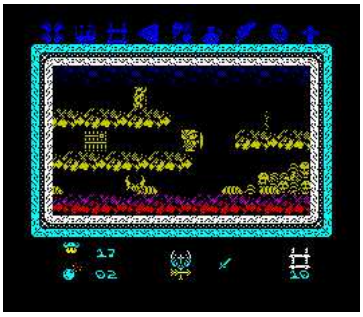


SOFTWARE 2016

Hello software friends,
In the last issue I started to present the programs of the year 2016. But I could not finish this project in one issue, because there were just too many programs. As I wanted to continue, I found that the website, which sorted the programs so far by release date, now presents this alphabetically. So now I'm trying to put the whole thing in the right order.
This time we only have games, since we had already presented all demos from 2016 in the last issue.
At first I found new sources and noticed that I missed games in 2015 as well. I can not bear anything, I'm hardly ever after this game flood anyway, but one or two are worth mentioning. Therefore, I start with the additions from 2015:

Addendum: Games 2015

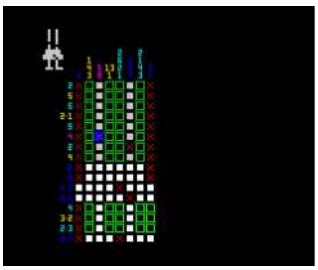
Knightmare 2 ZX *(Climacus, Karl McNeil)*



This nice Jump'n' Run is already the successor, I have never tested the predecessor. The game is reminiscent of Ghosts 'n' Goblins, but overall it's not so straightforward and trickier. You fight your way through the landscape collecting objects. Doors lead into other rooms so that the whole game does not just take place on one level. The graphics are monochrome, but good. The characters move fast and fluently, the game is funny. In the game there is only sound in the form of short beeps for hitting opponents or loss of energy. Definitely one of the better games.

»GAMES«

Pixel Quest *(Einar Saukas)*



The game is a so-called „Nonogram“. A calculation / puzzle game where you have to set pixels according to certain rules in order to get an image at the end. It is predefined e.g. a number 2-2 which means what two fields in that row or column are occupied, then one space and then two again. You have to calculate which two fields they are. The whole works especially at the beginning after exclusion procedures, because by calculating the horizontal and vertical fields in some cases it becomes clear how the pixels have to be set. This results in other fields. The idea may not be Einars, but the implementation is brilliant. You do not need great graphics either, but the cursor moves smoothly and accurately. The difficulty brings you to the limits when the pictures are getting bigger, so fun is guaranteed for a long time. The sound is a real earwig (AY sound in the game) and never annoying. It's not a super hit because the game baffles not graphically or with ideas, but it's just fun.

Target: Renegade 2 Mod *(Rafal Miazga)*

Target: Renegade was one of my favorite games, one of the few I played through. It was almost one of the first Beat'em up games and also the best, at least on the Spectrum. So Rafal had the idea to make a remake, but many were sceptical that it could be improved. What has been changed and really improved are the background graphics and the number of enemies. The game is not really different, but the improved graphics have succeeded. It does not always have to be something new, you can also refurbish something "old" ... fans can watch it. Target Renegade 3 has also been "remodded".
Overall, I counted 92 new games in 2015. In 2016, it was again about that number and in 2017 over 100, so a rising trend. It’s impossible to mention all programs here, so we sort out a lot in advance. So here is the rest of what we think are significant programs from 2016:

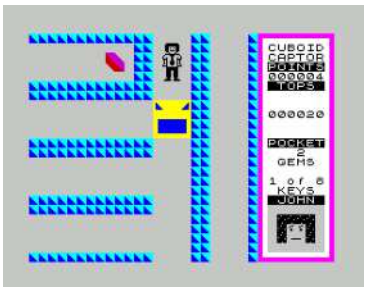
Games 2016

ZX Popeye *(Gabriele Amore, Alessandro Grusso)*

Even in the commercial sector, there were already some Popeye games. This new version is a bit like the first Mario Brothers game. Olive was kidnapped, Popeye has to rescue her and not get caught by Brutus. Sounds funny at first, but it is very difficult and

accordingly the degree of frustration is high. The necessary spinach cans are behind the stairs, which you always involuntarily climb up and down. A better and clearer control at this point would have been an improvement. Besides that, the game is fast, too fast. In addition to Brutus, there is another figure unknown to me who throws things at Popeye. However, this changes position completely unexpectedly, so that a previously safe level suddenly becomes a trap. The sprites are jerkily animated, although colourful but coarse. The rest is block graphics, a relapse into the early 80s. The sound is nice, but too short and annoying after a short time. Not a good start here, save loading time.

Cuboid *Captor (Prosm)*



A simple 16k game that looks like one from 1983 at first glance. In a simple labyrinth you have to collect 8 keys without letting yourself be caught. But you have no radar or anything similar. If one sees the "Cuboid" it is usually already too late. If you are unlucky, you even go straight into it. But with a little skill and tactics you can do it. The game is fast, but the graphics are pretty simple. There are only a few sound effects. Still, it's a challenge that has made me try it a few times.

Doctor Adventures *(Errecepe)*

Of course, tools like AGD and Churrera tempt the massive appearance of equivalent and very similar titles. Unfortunately, Doctor Adventures does not stand out from the crowd. The usual platform game here, not even with sound. Since Jet Set Willy the concept of skipping opponents and collecting objects is unchanged. The graphics, although reasonably colourful, are only middle class and just yawn ... fell asleep. (no picture)

ZX Nights *(Valdir)*

An interesting game concept inspired by role-playing games. There are actually only keystrokes, you quickly come to a fight and must defeat the opponent. Each dice has one of 5 symbols. If one

shows a symbol, you can hold it and only continue to dice with the others. On 3 attempts you should have something suitable, i.e. attack, armour / cover, healing, instant victory and immediate defeat. For victory and defeat you need 4 equal symbols, the other characters are counted, so 1 - 4 attack points for example. The opponent is defeated if he has no life left ... or instant victory. After one opponent comes the next...

I only played it briefly. The concept is interesting, but so naturally boring. But you could extend that, as the "Lone Wolf" books used to do. After all ... something different.

Mysterious Dimensions *(Hooy Program)*

A platform game, you hop from one platform to another, collecting diamonds ... why am I mentioning it here? Because it is fun! The character looks simply drawn, but is well animated, the whole animation is very fluent. The level of difficulty is exactly as it should be and most of all, you do not have these weird situations where you jump from one screen to the other, landing directly on an obstacle. Everything is well thought out, the graphics are not bad at all and the sound is fantastic. Really great, what it's getting out of the AY, because it makes it twice as much fun to play. Those who have not completely lost the desire for platformers will have fun here.

The Adventures of Winnie the Pooh *(Softland)*

Such games are just part of the Spectrum. An arcade adventure in the style of Dizzy, Seymour and many others, only this time it's Winnie the Pooh along with his friends Tigger and Co. Each of the friends also has a problem and Winnie can help. For example the owl needs their glasses, etc. One puzzle makes the other. The graphics are reminiscent of the

predecessors mentioned above, the sound is new but suits well. All in all, a professional appearance, I haven't solve this game yet. So it promises lots of fun.

Harrington - Convergence *(APSIS)*

This is a mix of Platform / Jump 'n' Run of the harder variety. Crashed with his spaceship, you have to fight our hero through an inhospitable planet. You do not have to collect anything, it's all about survival. Equipped with a laser weapon, you bring down the primitive beasts the old fashioned way ... the graphics are particularly impressive, very colorful and detailed, but in some places this is somewhat confusing. Above all, it's not always clear where it's dangerous to step. But that's the way it is when you crash on a foreign planet, there are all sorts of unknowns. It's a pity that you can easily lose your life - and you only have one. The game isn't too difficult, the difficulty seems appropriate. Sound is not available except shot sounds. Of course I just played it all out, but there are two parts in total, which definitely promises a lot of fun. So who wants to play a platformer where you can shoot ... get it!

Fantasy Zone - Escape from the pyramid *(GreenWebSevilla)*

Also interesting is this game, named after the original from Sega. You steer your robot through a labyrinth, where it can fly or run, but flying also brings a certain inertia with it. Enemies can be shot (multiple hits needed) or bypassed. Of course you need keys to open doors again, as with any Labyrinth game. The graphics are quite simple, the sound quite pleasant and the game control and animation really succeeded. Overall, no hit, because the concept is already outdated, but well done.

Escape from the holy tower *(Jevilon)*

A nice labyrinth puzzle for having a break. Collect the items on a screen in the correct order. The biggest difficulty is to recognize what the

individual objects do. The Spanish manual did not help me much, so try it. Interesting in the short term, but then a bit monotonous. The graphics are rather lower category, sounds are only noise. With a little more pep, it could have been more.

Crazy Kong City - Episode One: Saving Helen Blond *(Gabriele Amore)*

The game is very similar to Donkey Kong, but does not go down as a classic. The hero resembles the well-known Mario, but certainly means completely different. By means of jumping and climbing ladders, you have to come upstairs to eventually free the blonde, who was kidnapped by the gorilla. The animation is fast, but a bit jerky, the collision detection accurate. The difficulty level is appropriate, only the gameplay is a bit monotonous. It's all level by level, and some things you cannot control. So some barrels become fire devils when they come into the flames. But it is not always the case. When it does happen, the burning barrel can move slowly or it rushes towards you. Likewise, the barrels come from the top without warning and exactly in the moment when our hero runs under it. Since the number of lives is not limited, you have enough attempts, just I did not feel like continuing. The sound is really nice, yet it could not motivate me much longer. It's fun.

Donkey Kong Jr. *(Gabriele Amore)*

Donkey Kong in a different way: The evil Mario has captured the beloved gorilla and the junior is now here to save his dad. The graphics are not randomly similar to the game "Crazy Kong City" by the same author, but it's a completely different game. Instead of the gorilla throwing barrels, Mario (or another name) is now above and sends crocodiles to hunt for the junior. He can jump and

climb on lianas, must catch the keys that ultimately open the cage. I have not played the game for long, the frustration factor is very high. Just like Crazy Kong, the animations are just jerky, andmovements can not be precisely controlled. But this is exactly what the game demands, so the liana can only be reached from a very specific position. The jerky animation also affects the opponents, so almost hurts your eyes. Although the graphics are lovingly and colourfully drawn, the animation is in the early 80s. Here Gabriele should improve, at least he has good ideas.

Specsite *(Climacus, Adrian Brown)*

This little logic game is about moving the vertices of vector figures so that the lines do not cross. There is no time limit, so it's just a little tweeting that the characters are getting more complex. Unfortunately, there is a lack of incentive, precisely because there is no time limit and no limited number of attempts. The graphics are very simple, sound is completely missing, presumably so you can concentrate better. Overall, a nice game, but could have been made a little more elaborate.

Merry Christmas from Horace *(Steve A. J. Broad)*

Horace is back and the game is really reminiscent of earlier titles in the series. By that I mean that the game is about the quality of how the games were in 1983. I do not know the story, but you're standing on the roof of a moving train, collecting parcels floating in the air. If you do not move, you slide backwards in the screen section. So you have to keep moving and jump from wagon to wagon. There are opponents in the form of conductors and spiders, on which you can hop. In contrast to the earlier Horace games, this one does not seem to be fully developed, a conductor gets me off the side, he breaks up partly (like jumping on it) or you lose a life. I did not find a correct rule, probably because of that I thought the game was a waste of time after 5 minutes of playing. Not that I'm not a nostalgic guy, but with so many good games out there, I do not have to play bad ones.

Waiting for the light
(Jari Komppa, Kieran Coghlan)

A text adventure of a different kind. The choices are not entered as text but as options. This makes it less tricky in general, but does not disturb the atmosphere. Evaluating an adventure without completely playing through is hardly possible. It's more like a book that you read and make decisions from time to time. I can say it reads well and is exciting. You start in a dungeon without light, but suddenly light comes in and you enter an unknown world ... how it ends? Just try it, there are some traps.

Snake Escape
(Einar Saukas, Jarrod Bentley, MmcM)

In this game, the "Snake" principle is reinvented. The tail of the snake is getting longer and longer with each step, but you have to consider the laws of gravity to get the coveted apple. A fiddly game of the highest quality, graphically excellent made with the multicolour Nirvana engine. A nice and diversified sound accompanies you through the levels, which of course get more and more difficult with new features like sliding boxes. It's not a super hit, the game is ultimately too simple in principle. But it's fun for a while and could not be better. Perfect.

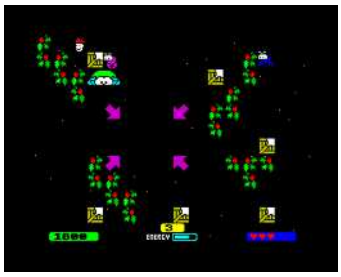
Rompetechos *(IvanBasic)*

Rompetechos is the implementation of a game about a Spanish comic hero. He has to find a letter he has lost. He should not have too much trouble with the law. For the game you only need 3 buttons, left, right and action. So you walk through the rooms, searching and hopefully finding something. The game surprises with all sorts of extras, such as the traffic light you should not cross at red. Despite largely monochrome graphics, this is not bad, but detailed and fitting as a comic. Except for individual noises, sound is unfortunately omitted, but fun is guaranteed and despite simple control, the puzzles can not be solved easily. Take a look.

Stela 2 *(J.B.G.V.)*

No issue with any games by J.B.G.V. After the obligatory as always nice intro, you recognize fast, that here a new play principle is used. Although you have in front of you a room you have to cross and overcome all sorts of obstacles, the character here is just a tiny little line to represent a spaceship that is constantly moving. You can only change the direction. Since some gates open and close you have to turn the correct curves to pass the gate at the exact moment it is open. You also have to collect keys later to get through some doors, all without a break. The game has a nice intro sound (beeper), but only noises in the game. The graphics are at best average, but this new gameplay is fun and also a change from the constantly same maze games. In addition, J.B.G.V. also installed a minigame, a simple shooter. Overall definitely worth the loading time.

Crappy Crates *(Sludge, Yerzmyey)*



Crappy Crates is actually a normal Sokoban clone, but a special one. The boxes must all be placed in a specific field. You can move the boxes only by swapping the place so you walk from the left over the box then you stand on the place where the box stood and move the box to the left. So you move each box so field after field until they're all where they should be. So far so good and only a little tricky. That changes with the other levels. First, there are obstacles which you have to turn around and, secondly, annoying beasts steal the energy and block paths. No energy = Game Over. Crappy Crates is a fun and colorful game with a rousing sound from Yerzmyey (AY). Special feature is that there's also a built in ULA+ mode. This one was not tested here because so far ULA+ is only an emulator. The animation is little to nothing, but the character moves quickly and the enemies are annoying enough to deal with. Overall, a nice game for breaks, but unfortunately without the possibility to save the level. Not everyone wants to start from the beginning, so unfortunately the game will soon be put aside again.

Zombo's Christmas Caper *(Malcolm Kirk)*

We are already in December on the timeline and therefore it's also time for a Christmas game. This is a maze game, you run, dodge, collect items and use them. Some tricky tasks are waiting for you, but everything has been seen quite a few times before and I suspect the game is just done again with the AGD. Nevertheless, it has fine graphics and as always with AGD at least no mistakes are to be found. I found it boring though.

Rediscovered Realms *(Paul Jenkinson)*

Paul wrote these text adventures in the early 80s. They were very simple BASIC programs, text input was compared to ready-made strings, so only very simple and ready-made commands were possible. The reissue of these text adventures brings a better, book-like description of the locations and a proper parser. The game itself was also changed a bit. Of course I did not play through the adventures, but it seems to me to be quite an interesting task for our Harald Lack, who likes to solve Adventures in our Tips + Tricks section. For adventure friends certainly the opportunity to look into four new adventures.

Cybermania *(Payndz)*

This game reminds me more of the beginnings of the home computer, but this is not basically meant pejoratively. Although graphics and the few sound effects are simple, this was a feature of the early computer games that made them fun despite their simplicity. A robot has to save people, no matter what. In any case, you should collect the stickmen, who also run around wildly. All other touches with any sprites should be avoided. It just sounds as it is. Unfortunately, the stickmen themselves often run to their doom, so you should hurry with the rescue. You only drive around in the labyrinth, you can'tdefend yourself, but you can turn on a kind of protective shield so that contact with the bad guys does not bother you. That's it, the enemies are

getting more and faster ... That's how it used to be. Fun for a while, and that's enough. Nice game.

In the Walls of Eryx *(Kevin McGrorty)*

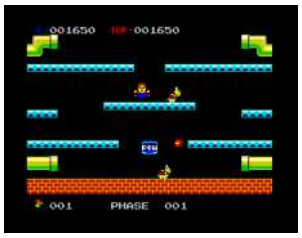
This game is a typical maze game, but with some subtleties. First of all, there is the oxygen supply, the air which decreases quickly. Only with the right strategy will you get to a refill point in time. You can't simply resist the various creatures that stand in the way by firing, you have to collect flame traps, which you must use cleverly, because they are very limited and necessary for the traversal of some rooms.

The graphics are fine, but overall they are not very colourful and also large parts of the labyrinth are only occupied by empty space. The character is well drawn but moves slowly, albeit smoothly. The game speed is also the thing that disturbed me the most and that there is no sound in the game. Not bad and certainly a challenge for some players, but rather the opposite of fast action.

Heroes Rescue
(Javy Fernandez, Javymetal, Radastan, Metsuke)

This time it is the hero who needs to be saved. In good old Manic-Miner-style you jump through the pictures, if there is an exit at the end or the hero has to be saved, if you collect balloons or keys, that does not change the gameplay. Nothing new, unfortunately. The graphics are nicely done, but you can already see something like this these days in multicolour. The game completely renounces sound. It's not bad, just not innovative.

Pietro Bros
(Cristian M. Gonzalez, Alvin Albrecht)



This game is based on Mario Bros and so ... yes, on a game that already exists. It's about preventing the sweet turtles from crawling into the tube. You can either hit the bottom of the platform you are walking on and then collect the inverted critters or just hop on it. The acceleration forces are programmed, Mario ...er... Pietro cannot do sudden changes of direction. This is so far the same gameplay as the Nintendo Mario Bros. I took the trouble to compare the 1987 Nintendo original with this version. Nintendo did the game without music, just a few notes in the game. The Pietro version has in-menu sound and a short tune when the game starts. The graphics in the original were clearly below the Spectrum's capabilities, almost monochrome, but with a great Mario sprite. The graphics of Pietro are smaller and finer, but more colourful, even multi-coloured by the Nirvana+ engine. I estimate the playability of Pietro to be a little higher. With Mario it was very hard to jump right under a turtle, with Pietro it's a bit more generous. In addition, Pietro can hop on a turtle as planned, Mario loses a life on contact. Pietro is not perfect, it is also not possible to jump from a standing position diagonally upwards. Despite this ... 30 years later, the best Mario on the Spectrum finally arrives and is now called: Pietro.

Willy Games: The first 30 years quiz
(Daniel Gromann)

Jet set Willy, but quite another game: a quiz. In this quiz you get 120 questions, but you have 120 minutes. Should be feasible, but just ... the answers should be correct. The author has certainly taken a lot of trouble with the questions, I would not find a way to think up so many questions. Although it's just a quiz, the graphics are pretty poor. Also, the control I think is awkward, instead of an arrow that must be moved, you could have just used the keys 1-4 for the multiple-choice questions. Most annoying is the music, which is very short and constantly repeated. With a 48k you would have to desolder the beeper, I just had to turn off the sound on the TV. For fans ... but really only for Willy fans.

Nemokay *(Alexsandr Titov, Zlata Titova)*

Even the first picture did not raise my expectations and unfortunately it stayed that way. With a helicopter you fly through a labyrinth that was probably

designed in 1983 and have to save other people. With every rescued person you get a life, but when you touch any walls or sprites (which seem to come directly from Manic Miner) you lose one again. There is a power button in every room, if you shoot at it, all attackers break up. If you come into a room it is always the same as the first one entered, so with power button, aliens and eventually a person you have to save. If you need a few extra lives, you always change into a clever room, shatter the button and collect the help seeker. I also found a key somewhere to open a gate. If you have found the end, it continues with the next level. I did not want to do that any more. The game has very simple graphics and in every direction another annoying sound. It does not make a special job, if I would not have fallen asleep, I certainly would have made the second level ...

That was the rest of 2016 and with that we will finally be able to start with the software from 2017 in the next issue at the end of 2018 and then probably in the beginning of 2018 we will be able to connect to the very latest software. Even though we are not in the limelight with this article, I hope the readers like this overview. Please give us feedback.

ADVERTISING IN THE YEAR 2018

"We were told by a bird that you will love this selection" ... eBay wrote this sentence to me and I received an offer for a football shirt (yes, I love football), a voucher for the PSN shop (PS4 games, I have a PS4), the Kaspersky Antivirus (which is installed on my computers) and Microsoft Office. The bird is probably more of a "Google" and the offers make me see terribly clearly, how transparentyou are to the corporations. I did not get offers from retro hardware, phone spare parts or contact lenses that I've been looking for on eBay, but offers for things stored on my computer. Why I did not get offered the Spectrum Next, although I also read every article about it through Google, I do not understand. However, I assume that soon a big player will take over production and flood the world with advertising. At least in this case, I hope so. At the same time, the spread of "Next" would be the downfall of this advertising industry. Back to the 80s.

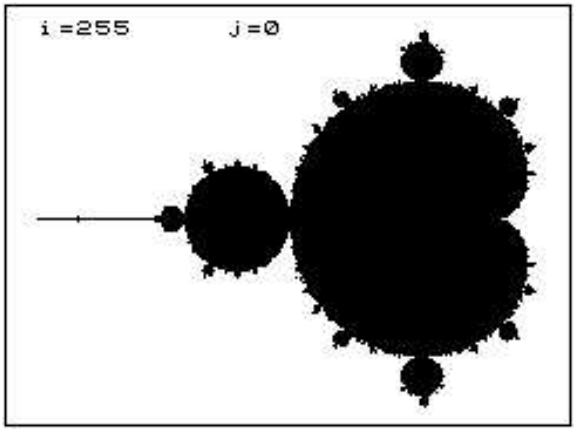
BASIC-GIMMICKS

So, the last pages have to be filled too. What is better than a few programs to type.

I wrote the first program on the Spectrum a long, long time ago and recently uncovered it on a leftover music cassette. The program calculates a fractal graphic, namely the famous apple male. In a way, it's a conversion from a CPC464, and it's really long!

So, if you want to let the Spectrum calculate for a long time - here is the right program for it.

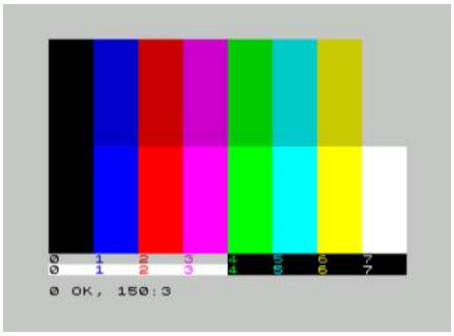
```
 10 REM --- Fraktal ---
 20 CLS
 30 FOR i=0 TO 255
 40 FOR j=179 TO 0 STEP -1
 50 LET x=(i-175)/90
 60 LET y=(j-90)/90
 70 LET xa=0
 80 LET ya=0
 90 LET iter=0
100 LET xtemp=xa*xa-ya*ya+x
110 LET ya=2*xa*ya+y
120 LET xa=xtemp
130 LET iter=iter+1
140 IF xa*xa+ya*ya<=4 AND iter<200
    THEN GO TO 100
150 IF iter=200 THEN PLOT i,j
160 PRINT AT 0,0;"i=";INT i;
    AT 0,10;"j=___";AT 0,12;INT j
170 NEXT j
180 NEXT i
```



The following program somehow always finds its application.

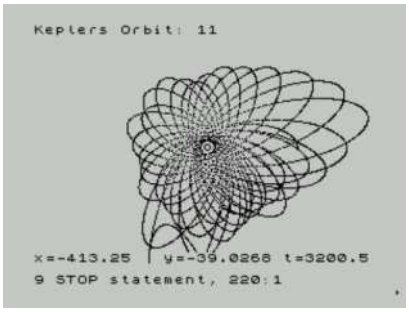
A colour bar is displayed in two different brightness levels.

```
 10 REM
    From the ZX Spectrum 48K Manual
 30 FOR m=0 TO 1: BRIGHT m
 40 FOR n=1 TO 10
 50 FOR c=0 TO 7
 60 PAPER c: PRINT "    ";:
    REM 4 coloured spaces
 70 NEXT c: NEXT n: NEXT m
 80 FOR m=0 TO 1: BRIGHT m: PAPER 7
 90 FOR c=0 TO 3
100 INK c: PRINT c;"   ";
110 NEXT c: PAPER 0
120 FOR c=4 TO 7
130 INK c: PRINT c;"   ";
140 NEXT c: NEXT m
150 PAPER 7: INK 0: BRIGHT 0
```

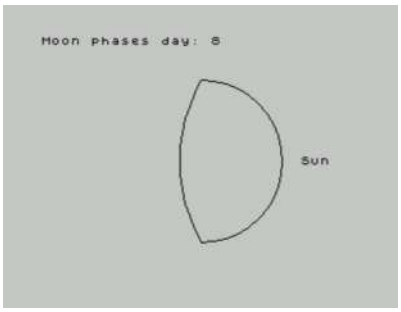


I unashamedly stole this and the program »Moon phases« from the book »Astronomy Programs for the ZX Spectrum«. In addition, in »Kepler's Orbit« I minimally modified it to improve the presentation to be as minimal as possible.
At the beginning the orbital speed is entered. A value greater than 10 catapults the orbiting body out of orbit. A value greater than 11 results in a reasonably stable orbit.
It is best to run the program with an emulator, as it runs very slowly on the Spectrum.
Have fun experimenting.

```
 10 REM ************************
 20 PRINT AT 0,0;"Kepler's Orbit:"
 30 REM ************************
 40 INPUT "Speed (5 - 30) ";w
 50 PRINT AT 0,15;w: CIRCLE 128,85,2
 60 LET h=.5: LET g=1000000
 70 LET x=g/1000: LET y=0
 80 LET i=h/4: LET v=0
 90 LET r=x: LET s=y
100 LET x=x+i*v: LET y=y+i*w
110 GO SUB 230
120 LET x=r: LET y=s: LET o=h/2
130 LET v=v+o*b: LET w=w+o*c
140 GO SUB 270
150 FOR t=0 TO 3200 STEP h
160 PRINT AT 21,23;"t=";t
170 LET x=x+h*v: LET y=y+h*w
180 GO SUB 230
190 LET v=v+h*b: LET w=w+h*c
200 GO SUB 270
210 NEXT t
220 STOP
230 LET e=x*x+y*y: LET d=SQR e
240 LET a=-g/e: LET b=a*x/d
250 LET c=a*y/d
260 RETURN
270 PLOT x/15+128,y/15+85
280 PRINT AT 21,0;"x=";
    INT (x*100)/100;
    AT 21,12;"y=";INT (y*100)/100
290 RETURN
```




```
 10 REM ********************
 20 REM *   Moon phases    *
 30 REM ********************
 40 LET x=2.5
 50 LET r=PI/180
 60 FOR d=0 TO 28
 70 LET p=PI
 80 CLS
 90 IF d>14 THEN LET p=-p
100 PRINT "Moon phases day: ";d
110 PRINT AT 12,25-(25 AND d>14);" Sun"
120 PLOT 128,10
130 DRAW 0,130,p
140 LET b=d-7
150 IF b>7 THEN LET b=b-14
160 DRAW 0,-130,x*ATN (r*b*25)
170 PAUSE 25
180 NEXT d
190 STOP
```



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